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ABSTRACT

Results of a national project to examine programs designed to aid college and university students not adequately prepared for postsecondary education are reported. Ten associate institutions were selected to form a consortium on the basis of evidence of success from relatively small, special programs for underprepared students. The programs included the Upward Bound Veterans Program at Oscar Rose Junior College, the Teaching Center at the University of Florida, Educational Opportunity Programs at Marquette University and California State University at Fullerton, Resources for Student Learning at Southeastern Community College, the People Center at the College of Staten Island, the Study Skills and Counseling Program at Malcolm-King Harlem College Extension, and the College Assistance for Migrants Program at St. Edward's. Bronx Community College was also selected although it chose not to highlight any specific program. Abstracts of final reports from eight institutions and the Thirteen College Curriculum Program of the Institute for Services to Education are presented, containing results in terms of the remedial programs involved, methodology and findings, and evidence of program success. Concluding essays on (1) research and program evaluation precepts and practices, (2) affective considerations, (3) program evaluation in terms of cognitive achievement, and (4) policy issues, research agendas, and programmatic concerns, discuss the implications of project findings. (TR)

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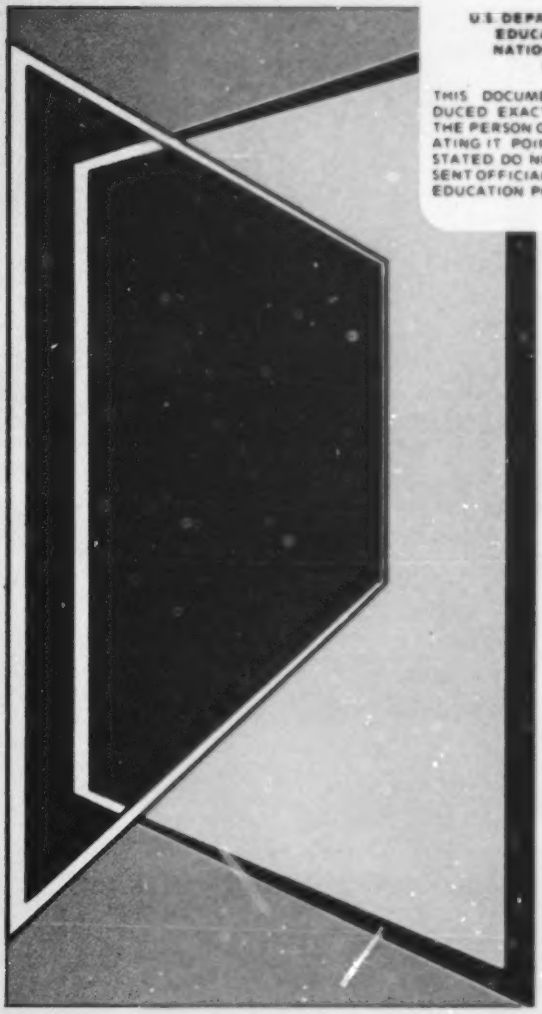
THE FINAL REPORT OF NATIONAL PROJECT II

Alternatives to the Revolving Door



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Introduction

The Fund supports over 160 projects each year. All are designed to create improvements in postsecondary education, in the programs and practices of college, universities, and the many other institutions that provide education beyond high school. In 1975, the Fund decided to engage in quite a different type of improvement. We supported two National Projects, which had as a major mission, the improvement of federal funding strategies themselves. Federal funding had been relatively effective in supplying money to get things started, but not so effective in developing understanding of the several dimensions of what had been started; nor, in postsecondary education, had we been particularly effective in creating vehicles through which others could learn about the outcomes, procedures, and problems of these new activities. New activities had been evaluated, but often too early to be meaningful. Sometimes traditional approaches were utilized that were more suited to established mature programs than to fragile, still developing innovations. It is indeed ironic that many of our more accepted tools for examining programs can be more appropriately used in establishing programs for which there are few demands for rigorous evaluation. And, when new projects are evaluated all too often the information developed is more useful to other evaluators and researchers than to other practitioners.

The goals of our National Project were designed to respond to these deficiencies. We wanted projects that were already under way but nonetheless represented relatively new efforts to address current concerns in postsecondary education. We wanted to establish a collaboration or network in which practitioners worked with each other and with evaluators to find better ways to understand their own activities; and we wanted to assemble a store of information about approaches to an acute postsecondary education problem that would be valuable to others working with that problem.

As the focus for one of these National Projects, we selected an unusually troublesome problem. Many students, at all types of colleges and universities, but with very high incidence at open admissions institutions, are inadequately prepared to undertake college work successfully. Hundreds of millions of dollars are spent each year in a wide range of programs to address this problem. Nonetheless, the pool of wisdom is meager about which programs work best for which students at what times and almost nothing is known about the impact of these programs on institutions.

National Project II devoted its energies to finding ways to understand these programs, to obtain information for both policy makers and practitioners, and, perhaps more importantly, to find new ways for evaluators to work with practitioners.

The essays and reports in this volume will tell you about the process and outcomes of National Project II. Not all our goals were met but substantial progress was made toward many. The Resource Institution, the Associates and the Advisory Panel are to be commended for striking out in unfamiliar terrain where the going was difficult and the rewards uncertain. Doing more than immediately required by their own projects, their efforts must be recognized as a signal service to a much broader spectrum of postsecondary education.

I hope you will find the accounts and essays useful. I hope, further, that this new type of collaboration will continue and be expanded. Those of us at the Federal Government have as much responsibility for experimenting with Federal funding strategies as does the field for experimenting with educational strategies.

Virginia B. Smith
Director
Fund for the Improvement
of Postsecondary Education

NP II: Origins and Outcomes

Origins

In the summer of 1975 the Fund for the Improvement of Postsecondary Education selected 10 institutions from among 225 applicants to be designated as Associates in National Project II: Alternatives to the Revolving Door (NP II). Each applicant for NP II had claimed that its program for underprepared students was demonstrably successful, although applicants were free to define "success" in their own ways and to submit varying kinds of data to document their claim. To one college success meant that underprepared program students persisted in greater percentages than so-called regular students, while another college argued that seemingly modest holding power — say 40% — was remarkable evidence of success in light of the economic, academic and motivational problems confronting students. A third college argued that its program not only could document a high rate of student persistence but, more importantly, could demonstrate that neither its graduates nor its drop-outs would return to their original occupation as seasonal farm workers, an explicit goal of the program.

The Fund interpreted success broadly and, I think realistically and showed considerable flexibility in its criteria for awards. It relied heavily upon on-site evaluations of the programs before arriving at its final decisions. As a result, a diverse group of two and four year colleges with different student populations, different program goals and different program emphases was selected. With the exception of the Institute for Services to Education, which based its proposal upon its history of technical assistance to and interaction with dozens of historically Black colleges, most of the colleges were selected on the basis of evidence presented about a relatively small, special program for underprepared students that existed within a larger college or university: the Upward Bound Veterans Program at Oscar Rose Junior College, the Teaching Center at the University of Florida, Educational Opportunity Programs at Marquette University and California State University at Fullerton, Resources for Student Learning at Southeastern Community College, the People Center at the College of Staten Island, the Study Skills and Counselling Program at Malcolm-King: Harlem College Extension and the College Assistance for Migrants Program at St. Edward's University. Only Bronx Community College decided against highlighting any single component of its program and chose to submit a full college proposal instead.

Designation as an NP II Associate was an action-oriented award. In applying, Associates had described particular research projects that they wished to explore and the Fund awarded each Associate approximately $25,000 to undertake and complete specific projects within 18 months. Some Associates wished to develop or validate placement instruments, others wished to analyze surveys describing their programs, whereas others initiated and sometimes completed longitudinal studies of their program's impact upon students' academic performance.

By designating one college to serve as Resource Institution and by stipulating that each Associate reserve sufficient travel monies to convene as a group five times during the 18 months, the Fund encouraged the Associates to view themselves as a consortium. It was the Fund's expectation and Bronx's hope that consortium meetings and interaction with an Advisory Panel expert in evaluation might modify or sharpen individual research designs. A related, secondary goal of Bronx as a Resource Institution was to arrange visits to each Associate's program in an attempt to familiarize the Associates with each other's programs and to isolate critical program variables. A series of site visit essays emerged from these visits and have been published in NP II Newsletters.

Outcomes

In the following pages we have attempted to describe as accurately and as succinctly as possible the research findings of the Associates. Since programs are often implemented before an evaluation system is agreed upon, the Associate's research sometimes necessarily involves the "backward search" for information that Jeannine Webb alludes to in her essay. A further complication for special programs — even good ones — is that they can be hazardous for Project Directors. In NP II, four of the 10 Directors lost their institutional position during the Project's duration. Changing fiscal conditions and advice from the Advisory Panel also influ-

enced the research designs. Consequently some research designs changed substantially during the term of the Project.

The task of editing down and standardizing the reports was valiantly undertaken by Pamela Tudor-Cohen and Barbara Schaier of the NP II staff. Since the reports ranged from 50-200 pages, sometimes including several goals and different research methodologies, Pam and Barbara's task was formidable.

The essays that follow by Sam Ball, Tom Donlon and Jeannine Webb discuss the implications of this research from different perspectives. Sam's genial essay discusses the controversy between proponents of a "hard" and "soft" evaluations and concludes that most Associates rely on both. He then comments on the many uses to which program evaluation can be put; how programs can be installed, accredited, modified, killed or glorified by evaluation. At its best, Sam argues, program evaluation can help us understand a program's "basic processes." It is possible, I think, to read the Associate's digests as a group and obtain valuable insights about common processes that respond to the needs of underprepared students.

Tom Donlon examines the Associate's concern for affective outcomes and processes. He notes that such attention to affective considerations is inevitable and necessary since "the forces that shunt these special, disadvantaged groups of Blacks, American Indians and Spanish-Americans away from higher education are deeply attitudinal; (therefore) the counterforces cannot be less so and be effective." Tom's observation about the three stages of a student's involvement with special programs—what he calls "attraction, participation and sustained commitment" — are particularly useful ways to understand the curious and complex journey ahead for underprepared students if they are to succeed in college. Tom's distinctions constitute a reliable barometer for measuring the comprehensiveness of special programs. His essay also offers an accessible compendium of assessment strategies utilized by Associates.

Jeannine Webb looks closely at the impact of the special programs upon students' academic performance as measured by the time-honored indices of success: retention, grades and performance on standardized test scores. In an important closing section, Jeannine discusses the "catch-up and catch-on" function of special programs and notes how most of the NP II programs help orient program students to the rules of a particular institution or, help the students "learn how to play the postsecondary education game."

The Associates' conclusions are impressive. As Jeannine notes, the Associates can document that underprepared students in special programs do persevere in college and attain grade point averages at comparable rates to regular students. Research also indicates that controlling certain variables may be critical to program success. For example, Don Mackenzie's research at Marquette indicates that first semester grade point average and the number of earned credits are relatively poor predictors of success while earned quality points provide a relatively stable index of a student's progress. This research, then, reassures program directors who have been advising students to take a reduced course load initially in order to enhance chances for success.

Sometimes the research has led to subtle program changes. For example, the Teaching Center (TC) at the University of Florida permits students to retake examinations as often as they wish within a three week post-semester period. TC research indicates that through the third test students improve, by the fourth test they don't. The program procedures will change slightly even if the underlying philosophy remains constant. At B.C.C., evaluations of STIR, LINK and Total Discovery, three successive interdisciplinary remediation programs, indicated that faculty and students benefited from a common two hour "town meeting" each week. As a result, a two hour time block has been programmed into all TD student and faculty schedules. The program evaluations also resulted in the decision to no longer schedule social activities in this time block, and instead focus the meetings only on academic and co-curricular activities.

There are limits to measurement, however. Surveys, questionnaires, grade point averages and the traditional indices of opinion and change offer insights into the meaning and worth of special programs, but can never illuminate enough. Research can document that CAMP students at St. Edward's, despite initial disadvantages, are more likely to graduate than regular St. Ed's freshmen and one can deduce that the mix of CAMP leadership, the screening techniques, the summer orientation program, the shared program rules and the carefully orchestrated support services are essential contributors to this persistence. I suppose that through student and faculty surveys one could attempt to isolate which of these variables is the most important, but if, as I suspect, program leadership might emerge as the crucial factor in the eyes of students, analysis and measurement may have exhausted their functions. People and procedures

overlap—the factors of successful education can no more be separated than the ingredients within the batter of a cake.

How *does* one assess the impact of a special program upon the institution as a whole? Perhaps through their surveys and follow-up visits, the Institute for Services to Education has more documentation than the other Associates about their institutional impact, but it is my informed hunch that the People Center has perceptibly altered the modes of counseling at the College of Staten Island, that the spirited faculty interaction at Malcolm-King: Harlem College Extension or the Upward Bound Veterans Program at Oscar Rose makes departments a little more uneasy about remaining secluded in their disciplines or that orientation programs at Southeastern and St. Edward's will never be the same once word of the RSL and CAMP summer sessions infiltrates the campus. If we return to that cake again, now fully baked, it is difficult to single out the butter, or the flour or the almond extract for commendation.

Richard A. Donovan

THE ABSTRACTS

The following abstracts of the NPII Associates' Final Reports contain summaries of the evaluation projects carried out with grants from the Fund for the Improvement of Postsecondary Education. Each digest is standardized so that the Associates' program, research problem, evaluation method and conclusions are accessible.

The abstracts reflect the varying designs and methods of each National Project II Institution. The conclusions presented are those of the individual Associate, not those of National Project II nor the Fund for the Improvement of Postsecondary Education.

For those interested in reading any of the complete Final Reports we suggest contacting the Project Director of the particular institution whose report is of interest.

Finally, we thank Fran Resto and Bess Heyman for their work in typing and retyping these digests. Their comments were as helpful as their cheerful presence.

Pamela Tudor-Cohen
Barbara Schaier

REMEDIAL PROGRAM
BRONX COMMUNITY COLLEGE — BRONX, NEW YORK

Bronx Community College (B.C.C.) is an open admissions, two year college of the City University of New York, having approximately 10,000 students. The average student age is in the mid twenties. The student population is predominantly Black (43%) and Hispanic (35%). Approximately 69% of the 1976 freshman class entered with below a 75% high school average and 25% entered with a high school average below 70%.

Bronx Community College has an extensive remediation program, available for all students, in the form of remedial courses, tutoring, counseling and financial aid. Additionally, Bronx offers special inter-disciplinary programs for students who choose them.

The Project Director is Dr. Richard Donovan. The Fund sponsored research was undertaken by Dr. Thea Benenson, Dr. Robert Dennehy and Barbara Schaier.

A. REMEDIAL PROGRAM

1. Admission

Students apply to the City University and are allocated to B.C.C. through the central University Admissions Processing System.

2. Remedial Placement

Under the supervision of the Department of Student Development, all incoming students take Math, English and Reading placement tests.

3. Registration

Initial registration is assisted by bilingual audio-visual aids and individual and group academic advisement.

4. Orientation

Subsequent to registration a six-session, no-credit orientation is provided for all students by the Department of Student Development.

5. Counseling

Each first year student is assigned to a specific counselor for academic advisement. Second, third and fourth year students receive academic advisement from teaching faculty. Special problems can also be referred to various specialists within the counseling department. The scope of services available includes vocational counseling and career exploration, financial aid advising, social worker assistance in dealing with city agencies and the services of both social workers and clinical and counseling psychologists for personal problems.

6. Remedial Courses

Remedial instruction at Bronx is decentralized; the Department of Special Education Services is responsible for remedial reading, the English Department for remedial writing, and the Mathematics Department for remedial math. Other departments such as Chemistry, Physics and Communication Arts and Sciences also offer remedial courses. Students enrolled in remedial courses do not receive degree credits. A limited number of degree-credit courses are open to remedial students, including courses in Health and Physical Education, Communications, the Social Sciences, as well as electives in Art and Music.

7. Tutoring

Tutoring assistance for students can be obtained for all courses through the Special Services Tutoring Program. Additionally, most academic departments offer their own tutorial laboratory.

Evidence of Success

Retention

Of any entering class, generally:
75% will return for the second semester
66% will return for the third semester
50% will return for the fourth semester

Graduation

About 27% of incoming freshmen do eventually graduate from B.C.C. It should be noted, however, that a substantial number of students transfer to and graduate from other CUNY institutions.

B. RESEARCH PROJECT

The B.C.C. Fund research consisted of three different evaluation projects. The first was to explore the technical characteristics of a recently developed Mathematics Competency Test (Stolurow, 1975) in order to determine its applicability to underprepared community college students. It was also the intention of this study to develop an equivalent form of the test and to evaluate the students' mathematics achievement over a four month instructional period.

The second project was an evaluation using descriptive techniques to measure classroom interaction in an interdepartmental program. This "interaction analysis system," which notes activities such as whether the teacher or student is lecturing, questioning, or responding, was used as a process descriptive tool, rather than a method for analyzing the content of the teaching.

The third aspect of the B.C.C. project was a study of the evolution of three successive interdisciplinary, remedial programs. These programs, STIR, LINK, and Total Discovery (TD) were studied to describe how educational strategies and goals changed as a result of program assessment.

C. METHODOLOGY AND FINDINGS

Mathematics Diagnostic Test

Two different groups of students, (N=52, N=88) both enrolled in a pre-college level mathematics course, were given the Mathematics Diagnostic Test before and after completing the Math course. The first group was students enrolled in a special interdisciplinary developmental program which provides heavy support services (counseling, tutoring and stipends) and block programming (TD). The second group was regular students enrolled in the remedial math course. The test in question showed a nearly perfect curricular fit with the remedial math course and it was expected that it would be a useful test for evaluating student progress.

The findings were disappointing, however. After four months of instruction, even when the subject matter was basic arithmetic, over 20% of the sample obtained chance scores. Despite

the frequency of chance scores the Mathematics Diagnostic Test, Form S, evidenced high internal consistency coefficients with the two college samples.

Results obtained on the post-test indicate that a second form, especially developed for this study (form A), could be considered technically equivalent to Form S, although further work is needed on a larger sample to corroborate these findings. On the post-test the small remaining sample sizes and the high attrition in the modular courses precluded a meaningful evaluation of student achievement.

Interaction Analysis System

Four remedial courses in a block-programmed, heavily supportive interdisciplinary program for underprepared, high-risk students were observed. Four non-TD classroom sections of the same remedial courses were also observed. Random selection of sections was not possible. The TD courses were taught by self-selected faculty and only those non-TD classes whose faculty agreed to be observed were used.

Data were collected on 25 categories of classroom activities by one of two observers, according to a specified format. There were twenty three classroom visits; each lasted fifty minutes.

When the four sections used were examined, non-TD classes evidenced significantly more "teacher speaking" and "student speaking" activities. TD classes evidenced significantly more "no speaker" activities; individual help and group activity accounted for the majority of the interactions. It is possible that the smaller TD class sizes and the presence of tutors in TD sections affected the results.

For both samples, "teacher speaking" and "no speaker" activities clearly predominated over "student speaking" and "other person speaking" activities. Regardless of expressed programmatic goals stressing informality or intimacy in TD, the classes in both samples had small numbers of observations in categories which would have been indicative of either informal or intimate interaction.

Evolution of Interdisciplinary Programs

Data from previous studies on three successive interdisciplinary programs were examined to determine specific advantages of the interdisciplinary approach to remediation and to study how this approach has evolved at B.C.C.

Advantages of TD

1. The interdisciplinary approach at B.C.C. has been successful in terms of holding power. With but a few exceptions the retention rates of students in the highly supportive interdisciplinary approach to remediation programs are as high or higher than those of regular college students.
2. Student satisfaction has been consistently high, with positive attitudes expressed towards the openness of faculty, interaction with other students and faculty, facility in dealing with college logistics (registration, centralization of classes) and availability of supportive services.
3. The additional support services implemented with TD: unlimited tutoring, additional class hours and greater availability of counseling and social work services, provide a wider range of possibilities for solving student problems.
4. The close working relationship between instructors and counselors resulted in the identification of counseling and tutorial problems. In turn, assistance could be offered to the students.

Evolution of TD

1. Involving students in the decision making process has had a positive impact on the program. Students have been encouraged to take more responsibility for their own academic success and for the success of the Program. This year, contracting has been introduced by some TD faculty.
2. Faculty who are attracted to STIR, LINK and TD and who feel comfortable with the interdisciplinary approach tend to be risk-takers and innovators, and feel comfortable with students both in and out of class. Although close student-faculty relationships are common in higher education, effective models of student-faculty cooperation, where students have a high remediation need, are lacking. Approaches for faculty interaction with underprepared students

have been experimented with successfully in STIR, LINK and TD. Not all faculty work comfortably with this approach, thus faculty self-selection is an important component.

3. Program goals have become more explicit. TD objectives have been framed in terms of attainability. The initial obscurity of STIR's intended outcomes made the success of the program difficult to evaluate. The more clearly stated objectives of TD has led to a greater clarity in identifying the outcomes.

4. An important addition to the statement of TD objectives is to enable non-competitive self-evaluation of faculty growth and teaching ability. In TD, faculty development includes not only the enhancement of teaching skills, but also a heightened awareness of variable student characteristics such as remediation needs, social and personal problems, student leadership potential and ethnic identity.

5. Faculty have recognized the importance of tightened course objectives for underprepared students and have thus proceeded to refine their objectives.

6. Faculty and students benefit from a common weekly meeting time. The consensus of opinion has changed from focusing the meetings on social events to devoting most of the time to academic and co-curricular activities. Experience with STIR, LINK and TD indicate that the common meeting time is crucial to the success of the program. Therefore, a two hour time block has been programmed into all TD student and faculty schedules.

7. Strong program leadership which can garner institutional support and effectively focus the energies of program faculty is a major factor in ensuring the Program's success. Without administrative support Project LINK was no longer funded by the Remediation Committee Budget. In TD, with increased administrative support, the Director gained control of the registration process for TD students, was able to set aside a two hour block for a common meeting time, had more influence in faculty selection, and could offer release time to faculty.

8. In TD, the source of funding is assured from semester to semester through College Discovery funds of the City University. This security has enabled faculty to spend all of their time on the Program rather than in seeking financial support.

EDUCATIONAL OPPORTUNITY PROGRAM
CALIFORNIA STATE UNIVERSITY, FULLERTON
ORANGE COUNTY, CALIFORNIA

California State University, Fullerton (CSUF) is a public four-year institution located in Orange County, California. The university was founded in 1957 and its present enrollment is almost 22,000 students. The majority of students are of white, middle income background and living within a twenty mile radius of Cal State Fullerton.

The Educational Opportunity Program (EOP) at Fullerton is an innovative educational program designed to provide comprehensive services for educationally disadvantaged and/or culturally different students. These services include the identification, selection, counseling and retention of students who would not normally acquire a university education because of academic, ethnic, financial or motivational barriers.

There are 700 students in the EOP program, 42% are Black and 42% are Mexican American. The median age of the students is 19.4; 47% are from families with less than $6,000 annual income; their composite SAT scores range from 600 to 800. The NP II Project Director is Dr. Arturo Franco. The staff member who has had consistent contact with NP II is J. Manuel Baca, Coordinator of Upward Bound Programs.

A. EOP PROGRAM

1. Selection of EOP students

The typical procedure involves assessment of students' financial need, motivation and initiative. An applicant is required to submit an autobiographical sketch explaining factors affecting prior academic performance and two letters of recommendation from a teacher, counselor, administrator, probation officer, judge, clergyman or other community person. There is also a personal interview.

2. **Orientation**

Incoming students are brought on campus, introuced to the staff and are then taken on a complete tour of the campus. Each student is programmed into the required classes after being tested for proper placement in the basic skills.

3. **Counseling**

Counselors maintain close contact with students to ensure completion of required course-work.

4. **Contracts**

Contracts are used for the completion of units under the guidelines of the Financial Aid Office.

5. **Curriculum**

Courses for EOP students are not considered remedial and are offered to all university students with some sections alloted to EOP students only. These courses, which carry degree credit, are designed to improve the basic skills in Reading, Writing and Math.

6. **Supportive Services**

The supportive services include housing, financial aid, placement, veterans services, health services, the Learning Assistance Center and tutorial aids.

Evidence of Success

Retention

A. Of the 297 students enrolled in the Fall of 1973, 270 were still enrolled at the end of the 1973-74 academic year.
B. Of the 240 students enrolled in the Fall of 1974, 207 were still enrolled at the end of the academic year.
C. Of the 275 students enrolled in the Fall of 1975, 255 were still enrolled at the end of the academic year.

GPA

A. Fall '73-Spring '74 (First year students)
270 students - average GPA 2.17
B. Fall '73-Spring '75 (First year students)
207 students - average GPA 2.17
C. Fall '75-Spring '76 (All present EOP students)
623 students - GPA 2.24

B. RESEARCH PROJECT

During the past year the Educational Opportunity Program at California State University, Fullerton has sought to more clearly identify and gather information on the effectiveness of its program. The following areas were studied:

1. Reasons EOP students drop/stop out
2. Effect of counselor contact on the selection of an academic major
3. Compared to a national study, characteristics and attitudes of fall 1976, EOP enrollees: economic, social, academic.
4. EOP faculty and student attitudes towards potential program areas: career counseling, learning centers and women's issues.

C. METHODOLOGY AND FINDINGS

Up-to-date transcripts were obtained on all Fall 1972 enrollees from the CSUF Admissions and Records office at the close of the Spring, 1976 semester. Since record keeping procedures

within EOP had not been well established, it was necessary to obtain transcripts on all two hundred and three enrollees. The EOP filing and record keeping system has progressed substantially since this period and it appears that a meaningful and organized system is developing.

Seventy of the 203 EOP students were interviewed during 1976. Thirty-four students had dropped our or stopped out; 21 of these stated financial reasons. Only eight of the twenty-one students had below a 2.00 grade point average and most of the twenty-one were well into their sophomore or junior year at the time of their departure. Many left to obtain full time jobs because, although financial aid was available, the assistance was insufficient. It is difficult to draw any conclusions on the survey made regarding counselor contact and selection of major, because 50% of the respondents (34 out of 70) were students who left the program.

In the Fall of 1976, a questionnaire designed to identify economic, social and academic characteristics of EOP students was administered to first time EOP freshman. Results were compared to those from a national survey directed by Alexander W. Astin of the Graduate School of Education at the University of California at Los Angeles. The results from this survey show that EOP freshmen are young (18-19 years old), single and seem to represent the lower economic and academic levels of the Astin Survey. It also appears that EOP freshmen's academic aspirations climb substantially after enrolling in the program. As a group, the responses indicate a high aspiration level, especially when compared nationally-63% of the freshmen expect to earn at least a B average as compared to 40.6% nationally. However, this unrealistic outlook is "balanced" by the students' responses on items pertaining to academic and personal needs. Many students felt they would probably "need extra time to complete a degree"; 59% of these same students stated they would "need tutoring in some courses".

In addition, EOP students indicated recognition of the need for vocational and individual counseling while at college. 37% indicated a need for vocational counseling, as compared to 7.2% nationally and 54% wanted individual counseling as compared to 4% nationally.

The final survey undertaken by the Project was to get feedback from 139 first year students and 19 full-time EOP staff members during May, 1976, on attitudes towards potential program areas. A majority of students polled (77.7%) would like a "learning center". Efforts will be made to develop at least one or two centers in the near future, possibly in student apartment complexes surrounding the campus. The most significant response to the EOP questionnaire indicated both staff and students see a need to understand the role of women in a changing society. EOP has responded to this need by offering special courses during the Summer of 76. Unfortunately lack of funds made a continuation of classes impossible. However, a new Women's Center has been instituted on campus and EOP hopes to expand its services by working with the Center.

Students were asked to note specific areas that might be covered by a "hot line," which was initially conceived to answer students questions on academic life. Academic advisement and financial aid stimulated the greatest number of responses. As a result of this survey, EOP expects to implement a system in which an open line will be available to students beyond working hours during academic advisement and registration. California State Fullerton hopes to use the information it has gathered for improving students' involvement and performance in the Program.

THE PEOPLE CENTER
COLLEGE OF STATEN ISLAND
STATEN ISLAND, NEW YORK

Staten Island Community College is a two year unit of the College of Staten Island, (COSI) a branch of the City University of New York (CUNY) having 9,500 students. The People Center was established in 1972 as a response to the advent of open-admissions at CUNY. It has 550 students, most of whom are white, 19 or younger and who have high school averages of 73% or lower.

The People Center has its own facility on the Staten Island campus and provides a warm, supportive, "drop-in" atmosphere for students. It utilizes a peer helping approach and an aggressive counseling model that holds counselors accountable for the academic performance of

the students. An insight basic to the People Center approach is that educationally disadvantaged students or underachievers do not require a therapeutic treatment model, but rather need to increase their ability to cope with the social environment.

The NP II program directors are Drs. Abraham Habenstreit, Joseph Hannam, and Ivan Smodlaka.

A. THE PEOPLE CENTER PROGRAM (PC)

1. Selection

Students are self-selected solely on the basis of their high school records (lower than 73% average).

2. Orientation

The orientation process is initiated during the months preceding the beginning of classes when students meet several times with program counselors to discuss curriculum choice, etc. Students know who and where their counselors are by the beginning of school.

3. Aggressive Counseling

Each counselor is required to have two personal contacts as well as two telephone contacts per month with each of their students. Students are motivated to maintain contact with their counselors because the counselors are perceived as being concerned and supportive. Counselors are also required to contact each of their students' teachers at least two times per semester and more if necessary.

4. Counselor Accountability

Counselors are held accountable for the academic performance of the students on their caseload, thus making it their responsibility to initiate and maintain regular and ongoing contacts with their clients.

4. Education Plan

Toward the end of the year's work with the student, the counselor designs, in conjunction with each student, an educational plan which is to be used by the student as a guide for subsequent course selection and program study. Although the plan may undergo considerable change, it at least provides each student with a written work sketch of their latest education and career efforts.

6. Supportive Services

The counselors in the program maintain good communication with staff of other supportive services on the campus such as the English and Math Skills Center, the Financial Aid Office, the Medical Office, the Student Tutoring Center, etc.

Evidence of Success

GPA and Retention

PC students who entered in September 1972 or September 1973, have retention rates and GPAs that are similar to those of a comparison group of non-PC (NPC) students with better high school averages (73-77). Graduation rates are also comparable.

Student ratings of counselors

Each semester students rate counselors on such variables as concern, empathy, respect, support, etc., and on more specific factors such as help in studying, staying in school, registration, courses, instructors, and financial aid procedures. These ratings have been overwhelmingly positive.

External Evaluations

The Program's performance has been externally evaluated from the very beginning, thus far with very positive results.

B. RESEARCH PROJECT

Investigations undertaken by an outside Research Group were designed as a series of exploratory probes that would ultimately lead to a clearer statement and measurement of affective program goals and improved techniques for the measurement of indices of success. While previous investigations indicate that PC students appear to overcome their academic deficiencies and the People Center has met its retention goals, the current research project was designed to examine special developmental needs of PC students, and determine if these needs are being met by the PC program.

The first step in the College of Staten Island's investigation was to determine what effective differences exist in PC and NPC students at entrance to College and after one year. The next step was to develop a profile of the Colleges' student life style in the belief that this would be useful in understanding the behaviors, attitudes and goals of PC and NPC students.

C. METHODOLOGY AND FINDINGS

The following questionnaires were administered to groups of PC and NPC students, to one group before college entry and another towards the end of the first year: information questionnaires designed to elicit information on student demographic characteristics, student life styles, and goals; an adjective check-list, and a short version of the *Omnibus Personality Inventory* (OPI). In addition to these forms, members of the Research Group interviewed students, faculty, and staff.

Information Questionnaire

With some trivial exceptions, questionnaire responses show that PC and NPC students are essentially the same in their demographic profiles. However, while NPC students see themselves completing a four year academic degree, many PC students would prefer jobs after two years and therefore realistically foresee the need for more vocational/technical training.

Findings on student life style indicate virtually no differences between PC and NPC students in how they distribute their time.

On the basis of this information and the post-college goal statements College of Staten Island students - especially PC students - were assigned to the "vocational" typology. They do not express interest in radical thought or activity, in ideas as such, or in the traditional collegiate pastimes. Their objective is to obtain the skills needed for a comfortable and satisfying family life without material wants or major responsibilities.

Another finding is that entering PC and NPC students report very little contact with formal services and high counselor dissatisfaction. After one year NPC students continue to underutilize services and perceive them as less helpful than PC students. Significantly, PC students use more frequently, and are more satisfied with counseling services after one year, than NPC students.

The help seeking pattern of all students who have been at the College indicates that college helping resources are seen as appropriate primarily for educational rather than personal issues. However, observations of the PC suggest that many personal issues are discussed with counselors; initial issues usually are school related but personal agendas are raised in the context of the session. It was also found that many students admitted that getting good grades was the important course objective for them. Consequently grade getting skills (and strategies) are more important than learning.

Careers are viewed as instrumental, or the means to a good comfortable life. In this sense students seem to have a narrow view of their possibilities and little ambition to seek a more aggressive involvement in community affairs. It appears that COSI students favor a low risk search for comfort and security.

Omnibus Personality Inventory

The results of the OPI indicate no strong differences between PC and NPC students either at entrance or after one year. However, the greatest change noted was between entering and second year PC students on the Thinking Introversion Score of the OPI. The difference indicates a sharp increase in academic interest and reflective thought. It seems reasonable to believe that a combination of effective suport and academic success contribute to this change for PC students.

While there are few differences between PC and NPC students on the OPI scales, there are several distinct differences by sex. Women at entry are significantly higher than men on the Thinking Introversion Scale and on Autonomy. After a year this difference no longer appears, but women score lower than men on Complexity and higher on Altruism.

The implication of the OPI data is that PC and NPC students share a common developmental stage. Very possibly PC students represent the psychologically sturdy underachievers who have not internalized perceptions of inadequacy and are unwilling to be victims of prior environment and circumstances.

Adjective Checklist

From an adjective check list it was found that self-descriptions for PC and NPC students are almost identical. The self-descriptions tend to illustrate some of the "denial of failure" noted by counselors, as well as some evidence of lowered self-esteem despite a generally positive self-portrayal.

The fact that these underprepared students enter with the "denial of failure" attitude and unrealistic assessments of their characteristics and skills can be explained by their having made a hard decision, possibly against tradition, to attend college. It is not hard to understand that students would assume the qualities generally accepted as necessary for success, i.e. say they are leaders, well-organized and self-confident.

Student and Faculty Surveys

In student and faculty surveys respondents are virtually unanimous in giving major credit to the PC for significant improvements in student performance and attitude. They say that the PC provides students with a sense of purpose and drive often lacking in other students. Faculty also say that the PC helps them be better teachers. Many have redesigned courses to provide more time on basic skills and review. Despite fiscal threats none of the faculty would recommend a reduction of PC services. In fact almost all urged that it be expanded to all students.

Although this investigation found some differences between PC and NPC students, more differences occur between the men and women. Observations of the PC are that more women seem to use it than men. The data argue for more attention to men and differential services for men and women.

THIRTEEN COLLEGE CURRICULUM PROGRAM
INSTITUTE FOR SERVICES TO EDUCATION
WASHINGTON, D.C.

In 1965, the thirteen College Curriculum Program (TCCP) was organized as a consortium of colleges interested in an experimental freshman year program. The Institute for Services to Education (ISE) served as consultants to the consortium to help initiate its innovative program. ISE is a private non-profit corporation, specializing in faculty and curriculum development, planning and management systems, and research and evaluation for institutions of higher education.

The thirteen original TCCP consortium members (see Table 1), in concert with the ISE staff, developed the basic curriculum materials which are available and distributed by ISE. Together, the consortium members representing the institutions identified in Table 1 developed and refined those teaching techniques and strategies which promoted a positive self-concept in students, and an ability to critically analyze life's problems.

The success of the TCCP led to the creation of three additional consortia between 1968-1973. Currently, although most of the colleges continued to meet informally, there are no longer any formal consortia. Each institution has a bilateral contract with ISE. There are students in 24 institutions utilizing the developed program with a range per school from 100-600 students. The refined program is not and has never been considered as a remedial program, but rather a different approach for teaching freshmen and sophomore courses. The average age is 18, with a median family income of $4,000. The population is predominantly minority and students average a complete standard deviation below the norm for entering college freshmen on the ACT. The ISE NPII Project Director is Dr. Gerald Durley.

MEMBER COLLEGES OF THE ORIGINAL THIRTEEN-COLLEGE CURRICULUM PROGRAM

Alabama A&M	Huntsville, Alabama
Bennet College	Greensboro, North Carolina
Bishop College	Dallas, Texas
Clark College	Atlanta, Georgia
Florida A&M University	Tallahassee, Florida
Jackson State College	Jackson, Mississippi
Lincoln University	Lincoln, Pa.
Norfolk State College	Norfolk Virginia
North Carolina A&T State University	Greensboro, North Carolina
Southern University	Baton Rouge, Louisiana
Talladega College	Talladega, Alabama
Tennessee (A&T) State University	Nashville, Tennessee
Vorhees College	Denmark, South Carolina

A. THIRTEEN COLLEGE CURRICULUM PROGRAM (TCCP)

1. Development of experimental freshman curriculum

In 1965, a consortium of 13 historically Black colleges and universities worked together with ISE to develop and refine pedagogical methods and strategies, and curriculum materials for entering freshmen and sophomore students.

2. Commitment to TCCP Model

Each of the TCCP colleges was obligated to follow the plan for installing and implementing the educational model on its respective campus. This required commitment by administration, teaching faculty, students and parents.

3. Fixed Program and Class Size

Originally the program had a fixed classroom ratio of 1:25 students, with students attending class four times a week. Teachers were given release time to prepare for each class. Their maximum teaching load was originally 8 hours and later became 12.

4. Curriculum

The following sets of courses for the first two years were developed: a) Freshmen—four courses, four credits each (English, math, social science, physical science and biology), b) Sophomores—two courses, three credits each (humanities and philosophy). Extension of curriculum development to upper lever courses was undertaken later.

5. Student Participation

A central methodology which emphasized student participation and discussion was established in all courses. Students were encouraged to take an active part in their educational development.

6. Counseling

The counselor was established as an integral part of the new educational team, with responsibility for recruiting students, arranging campus housing, orientation to campus life, assisting with financial information and concerns. A central function was to be an advisor or consultant to the classroom teacher. This was accomplished via classroom visitation by the counselor.

7. Organization of Faculty

The selected faculty in the program were organized into a unit to facilitate their work together and ensure maximum integration of subject matter for the students. This unit has been referred to as Freshmen Studies, Basic Studies or General Studies Program.

8. Student-Teacher-Counselor Groups

150 students, all using the same team of teachers, were grouped together. A counselor was part of the group and one director was responsble for coordination of the teaching units. Simultaneously another 150 students (i.e. control groups) were being taught by other faculty. The two groups gave the data for the success of the process during the first five years.

9. Summer Workshops

For six weeks each summer, selected teachers and counselors from TCCP schools attended a summer session where they participate in faculty and curriculum development. These workshops, sponsored by ISE, concentrate on the actual writing and refinement of the course manuals (i.e. textbooks) which are used by the institutions during the academic year.

10. Regional and National Conferences

The teachers meet 3 times during the year at two regional and one national conference on curriculum development. These conferences, coordinated by ISE, are used for evaluation of previous efforts and implementation of future program ideas on the campus. Additionally, ISE staff visits each of the teachers in his/her classroom during the course of the year to assist with any teaching difficulties.

Evidence of Success

Results for the first generation of students who had TCCP in their freshmen and sophomore years (1967-68; 1968-69) and had become seniors (1970-71) indicate that:

1. TCCP students entered senior year in higher percentages (62.5%) than regular students (46.9%).
2. TCCP students achieve higher grade-point averages than regular students.
3. TCCP students scored higher on standardized verbal ability, math and science tests after completing freshman and sophomore years than regular students.
4. TCCP students achieve more positive personality and self concept development compared to non-TCCP students as measured by standardized tests.
5. TCCP students have won more academic honors than students who were not exposed to the TCCP methodology curriculum.

B. RESEARCH PROJECT

The questions this research project addressed were "Did the Thirteen-College Curriculum Program (TCCP) have a long-term impact in a permanent way, on the respective participating institutions? What factors accounted for the impact?"

C. METHODOLOGY AND FINDINGS

The research technique adopted for this study is the descriptive survey method, which contains substantial elements of historical research and qualitative analysis. The historical research element was utilized to provide a foundation for analysis of current data.

In piecing together the activities of each of the original TCCP Institutions during the last eight

years, the investigator used the following written materials: the TCCP directors' reports; conference proceedings; correspondence; resource materials collected in program files and TCCP/ISE publications; interviews and questionnaires. The documentation from each participating institution was analyzed for clues to the differentiating features in the administration, staffing, organization, or processing of the Thirteen-College Curriculum Program.

An open-ended questionnaire was also designed to query a random sample of persons who participated in the programs at various times.

The evidence suggests that after the federal funds were no longer available to support the TCCP on host campuses, the experience of having participated influenced the institutions both in their curriculum materials and freshmen teacher selection criteria. Elements of the Program have been incorporated into the instructional units. In many instances, TCCP techniques are utilized as a regular part of the instruction and orientation programs for all incoming students. Moreover, special developmental sessions are offered as a part of regular departmental course offerings when needed or requested. Departments also offer more tutorial services and instructors are encouraged to be more supportive of student needs.

Although various components of the TCCP were discontinued, many of the original institutions in the TCCP have continued to design curricula to meet the specific needs of the students who enroll at the institution. In some cases, when the Federal funds were discontinued, the institutions began to absorb the Program concept and expense into their institutional budgets.

Factors that Accounted for the Impact of TCCP on Host Institutions

1. The compatibility of the program goals with the institutional goals was an essential component for the continuance of the TCCP concept once Federal funds were no longer available.
2. In those institutions where perceived goals were not strongly akin to those of TCCP, the initial and continuing success of the TCCP is attributed to the administration of the Program. Former TCCP directors hold key administrative positions at some of these institutions. The significant factors here at the director's ability to create and foster institutional consciousness and team spirit, to articulate program goals, and to recruit and maintain professional personnel who relate well to the students and understand and act on the concept of the Program.
3. Respondents viewed the excellence of TCCP professional staff as extremely significant. Staff with less than five year's teaching experience received higher ratings than staff with more than five years experience, with respect to adaptability, creativity, ability to implement the Program and other selected factors. Thus, to seek teachers who have not been indoctrinated in the educational system was interpreted as being essential in sustaining the Program concept.
4. Respondents tended to view institutional support as important; however, it was not regarded as the sole criteria for success. Success was reported when students did not leave the institution prematurely.

The experience gained in the TCCP does suggest new strategies that can be employed for institutions that are concerned about correcting their freshmen attrition problem. TCCP has demonstrated that students who are disadvantaged, and academically poorly prepared, can have successful college careers when supplied with efficient and effective curriculum materials, concerned trained teachers, committed institutional direction and integrated counseling.

STUDY SKILLS AND COUNSELING PROGRAMS
MALCOLM-KING: HARLEM COLLEGE EXTENSION
NEW YORK, NEW YORK

Malcolm-King: Harlem College Extension was established in 1968 by a group of Harlem residents in response to the postsecondary educational needs of adults in the neighboring Harlem communities. It is an official extension of three private colleges—Marymount Manhattan College, The College of Mount Saint Vincent, and Fordham University. These sponsoring col-

leges provide college credit as well as library facilities. Classroom space is provided by local community organizations.

When Malcolm-King was founded, a major goal was to provide students with beginning college courses (up to 30 credits) and to help them transfer to other institutions. The students themselves wanted to earn a Malcolm-King degree. Marymount and Mount Saint Vincent responded by having their charters changed to enable Malcolm-King to offer three associate degree programs (Liberal Arts, Business, and Education). The first degree program was awarded in 1973. Originally there was no tuition charge; now there is a low cost tuition. Although at first all Malcolm-King faculty and staff were volunteer, a salaried staff of about 35 counselors, administrators and a small adjunct faculty now supplement the mostly volunteer faculty.

Currently there are more than 800 students. The average age is over 30, the average family income is $6,000 and 90% of the students are Black. Entering students taking the McGraw-Hill Reading Test score in the bottom one third percentile.

The Project Director is Dr. Mattie Cook. Carole Stevens, Valerie Anderson, Judith White, Dorothy Harris, and Harry Franklin have been involved with the Project from the onset. Malcolm-King was funded to examine their Study Skills and Counseling Programs.

A. STUDY SKILLS AND COUNSELING PROGRAMS

1. Admission

An earned high school diploma is the only requirement for admission to Malcolm-King; however a small percentage of students are admitted while they earn that degree.

2. Recruitment

Recruitment is done on a limited basis by the Director of Admissions who visits community agencies, GED programs and the Educational Opportunity Center. Most recruitment occurs by students and volunteer faculty telling their friends and other students about the program.

3. Orientation

With assistance from counselors and administrators, the student government plans orientation for the entire student body in the beginning of every semester. In addition, the College and Career Orientation course is required for all new students.

4. Counseling

The counseling program offers aggressive individual counseling as well as two courses. College and Career Orientation, and Human Relations. Students are required to see counselors for pre-registration. In addition counselors must contact each student during the semester. In order to increase the availability and accessibility of counselors, a room in the building where most of the classes are held has been set aside as an additional counseling office.

5. Study Skills Program

This program is designed to provide the student with an academic foundation that will enable a successful entry into a regular college program. The courses offered are College Study Skills, Critical Analysis (reading), Preliminary English, Basic Language Arts and a writing workshop. One or two credits are given for most of these courses and placement is based on results from exams taken at the time of admission. Tutoring on a one to one basis is offered in all subjects.

Evidence of Success

Influence on job status

Questionnaires sent to 500 students who either graduated transferred to other institutions, or discontinued their studies from 1971 to 1973 indicated that out of 183 responses 50% improved their job classifications and salary as a result of attending Malcolm-King.

Counseling survey

A survey of a random sample of students to assess the effectiveness of counseling showed that 98.9% of students knew their counselors, 80% had at least two contacts with counselors that semester and over two thirds of the students expressed increased firmness of occupational choice since receiving counseling.

Number of Graduates

Although the original goal of Malcolm-King was to prepare students for transfer to other colleges, since 1973, 187 students have received AA degrees from Malcolm-King. Most of those go on to four year colleges. Many who do not graduate, transfer to other schools before they finish the 64 credits required for the degree.

B. RESEARCH PROBLEM

The thrust of the Project II research study at Malcolm-King College was to determine the effectiveness of the Study Skills and Counseling programs.
The evaluation consists of:

1. The setting up of a data bank for three semesters of placement scores and demographic variables.
2. A comparison of the demographic characteristics of successful and unsuccessful (drop-out or lower than 2.0 GPA) students in order to develop profiles.
3. Measurement of selected student attitudes through the use of interviews and questionnaires. Emphasis was placed on measuring attitudes towards counseling and remediation.
4. Observations of study skills and counseling courses to determine the quality of the instructional process.

C. METHODOLOGY AND FINDINGS

To measure the effectiveness of the Study Skills and Counseling Programs and to compare those students who succeeded at Malcolm-King with those who did not, attitudinal, demographic and academic data were collected and classroom observations and interviews were conducted. The subjects of this study were incoming freshmen in the Spring, Summer and Fall semesters of 1976. A data processing system has been established for assisting the Project II Committee of Malcolm-King in carrying out this study.

Classroom Observations of Study Skills and Counseling Classes

Objective, standardized observations were conducted in the Spring (1976) and Summer semesters on a 40% random sample of Study Skills and Counseling classes to evaluate the instructional process. The observers rated all groups and counselors very highly with respect to 1) sensitivity to individuals' needs; 2) ability to express feelings in general; 3) extent to which respect for individual feelings and responsiveness to others was demonstrated.

In the groups observed, all the counselors adopted the role of an assertive and directive group leader. The counselors introduced the session's topic, focused the discussion, actively attempted to involve non-participants, and summarized the topic. There was a considerable amount of variation in the observers' ratings of the counselors' role in clarifying issues.

Observers ratings of the Study Skills classes indicate that rapport between teachers and students was excellent. The observations also indicated that instructors were knowledgeable in their subject areas, the classroom activities were appropriate for the courses' objectives and for the students' levels of attainment and that the students were interested and attentive.

The students' interaction in the classroom, and their motivation and involvement in the courses were rated from good to excellent in all classes observed. It should be noted that in some instances, students were engaged in classwork that many would consider elementary. The adults in these classes, often older than the average college student, were as highly attentive and involved as were those in more "advanced" courses. This seems to indicate that Malcolm-

King students are highly motivated and that the instructors have the ability and creativity to make even grammar and punctuation interesting for their students.

In conclusion these ratings suggest that the Counseling and Study Skills classes are meeting the needs of Malcolm-King students.

Interviews

Formal, standardized interviews were conducted on a random sample of approximately 10% of the population to measure the qualitative aspects of participation in the remedial and counseling programs. The 18 students that comprised the interview sample responded positively to questions about their general experience at Malcolm-King. They expressed positive attitudes towards counseling and remediation, felt positively about their ability to successfully complete their college education and gave a very favorable evaluation of their Study Skills and Counseling classes.

Demographic and Academic Data

Demographic data were obtained from official records to determine the relationship between demographic variables and academic success, as assessed by scores on reading tests and GPAs. In addition, information pertaining to courses attempted, courses completed, counseling contacts and diagnostic test results was obtained. An analysis of the relationship between gain in reading scores from pre-test to post-test (after six months), on the one hand, and such variables as income, occupation and marital status indicates that these variables do not differentiate those students who improved from those who did not. (This finding could be influenced by statistical artifacts). However, the findings differ for the correlation of selected variables to grade point average. In this case, several demographic variables—age, sex and occupation—predicted a high versus low grade point average. Older women were most likely to earn over a 2.0 GPA. Those students in the highest occupational category (professional/managerial workers) were most likely to have earned low grade point averages, while students in the lowest occupational category (unskilled workers) were most likely to have earned a high grade point average.

Attitudes toward Counseling and Remediation

Attitude questionnaires were administered to all incoming students to determine attitudes toward counseling and remediation. A follow-up questionnaire was later administered to these students to measure attitude change after exposure to the Study Skills and Counseling programs. The questionnaire was designed to tap six variables: self-concept, attitudes toward school, perception of the impact of college on one's life, previous relationships with counselors, attitude toward counseling and perception of the effectiveness of the Study Skills and Counseling components.

Responses indicate that the self-image of the 1976 incoming freshmen at Malcolm-King is strongly positive. It may be that these responses are due to students giving socially acceptable answers. The vast majority of students seemed to have no problem asking for help, handling problems, mastering academic subjects or expressing themselves, and they perceived themselves as intelligent and adequately prepared for college level course work.

In addition, the results of the questionnaires indicate a positive attitude toward school. This is to be expected since the sample does consist of older students who have returned to school of their own volition. The students' attitudes towards counseling were generally positive. The findings revealed that 1) men had more frequent contact with counselors than women; 2) those students with more education had more positive relationships with their counselors; and 3) younger students were more likely than other age groups to have had a negative counseling relationship. On the first questionnaire the older students were likely to equivocate on whether mature adults needed counseling as much as younger adults and were somewhat divided over the extent to which they voluntarily sought counseling in the past.

The follow-up questionnaire resulted in a greater variability of responses. Sex was a determining factor in how the respondents felt about the counseling needs of mature versus young adults, whether counselors are skilled professionals and whether the student would initiate a counseling relationship at Malcolm-King. Men were less likely to approach their counselors first or to think counselors were skilled. These findings suggest that the Study Skills and Counseling

Seminars must somehow adapt their services to what seem to be different needs of male and female students.

The results of this study point to recommendations for the continued improvement of the Malcolm-King program. Perhaps the most outstanding result of the attitude questionnaire was the surprising number of sex-based attitudinal differences. This finding suggests that the nature of the differences between male and female students be explored. Perhaps the Counseling Seminar can be expanded to include male and female perspectives on the topics usually discussed in these sessions.

EDUCATIONAL OPPORTUNITY PROGRAM
MARQUETTE UNIVERSITY
MILWAUKEE, WISCONSIN

The Educational Opportunity Center (EOP) currently enrolls about 250 students at Marquette, a private Jesuit university with about 7,200 undergraduates. The NPII Project Director is Dr. Donald Mackenzie and the Director of the EOP is Mr. Arnold Mitchem.

Most of the incoming students enrolled in the EOP are between 17-18 and have an average family income of $3,100. Upon entry, the reading and mathematics levels of many of the students are below 9th grade.

An important facet of the EOP is the centralization of student services. Financial aid delivery, tutorials and special classes, academic advising, counseling and various kinds of administrative liason are combined within one office.

A. EDUCATIONAL OPPORTUNITY PROGRAM

1. Recruitment

Students are recruited and selected primarily from the five high schools in Milwaukee which serve low-income residents of the inner city.

2. Selection

Final selection is based on federal low-income criteria, a demonstrated interest in enrolling at Marquette and evidence of academic potential. Each student is admitted both by the EOP and by an academic college or program.

3. Summer Session Orientation

Many of the high risk students are required to enroll in a 6 week summer program where students live on campus and participate in developmental English, reading and mathematics courses. Students meet with counselors individually and in groups. A prescription of support to complement selected courses is developed for each student.

4. Financial Aid

All students admitted are guaranteed up to ten semesters of full financial aid, conditional on satisfactory academic progress and participation in support services.

5. Tutorial Program

Students who are not making satisfactory progress are required to meet with tutors for a minimum of two hours per week. Weekly reports are submitted by tutors to the Associate Director for Instructional Support to enable the monitoring and assessment of student progress. The EOP offers a series of seminars to supplement developmental mathematics, statistics and calculus courses. Weekly support seminars are offered by selected faculty or graduate students in chemistry, philosophy, history and other disciplines to help students with materials presented in lectures.

Evidence of Success

Retention

The retention rate has consistently been equal to or above that for Marquette regular students, about 56% over 4 years.

Graduation

15% of students admitted have graduated after 4 years, 37% within 5 years, and 51% within 6 years.

B. RESEARCH PROJECT

The NP II evaluation project at Marquette has been to develop a system for management of student performance data which allows for the comparison of student grade and credit production at various points until graduation. By developing standards of performance which can be used to compare students at similar points in their college history, assessment of program services is possible. In addition, a student demographic and attitudinal survey was conducted.

C. METHODOLOGY AND FINDINGS

To establish the levels of progress which have been required for Program students to earn degrees, data were compiled for 68 Program graduates in their first six semesters of enrollment. Three positive criteria of academic progress were considered: credits earned, grade average (GPA), and quality points earned, which amounts to credits weighted by grades.

To summarize the total distribution of each criterion among successful graduates, percentile ranks were constructed for each of the first six semesters of enrollment.

A comparison of percentile norms indicates that credits earned during the first four semesters would appear to be an unstable criterion for the success of Program students. It seems probably that external emergencies and problems of adjustment to college may frequently force first and second year students to adopt severely reduced course loads, or even to withdraw from the University.

Evidence obtained from squared correlations shows that quality points earned is the most stable index of individual progress and predictor of future progress for Program graduates. Particularly as compared to credits earned, the distribution of quality points earned stabilizes more quickly in time; after the third semester of enrollment, 97% of eventual graduates had earned at least 60 quality points.

The findings also indicate that early GPA, unless it is very low, may not be a good indicator of graduation for the first four semesters.

In another aspect of this study separate multiple regression models were constructed for new and continuing students, using selected demographic variables, high school performance, the past academic performance of continuing students, and participation in the Program's Summer Sessions and academic year tutorials.

The following major observations emerge:

1) There appears to be a discontinuity between high school and college achievement. High school performance influences first semester academic performance, but further college achievement is primarily a function of past college achievement. This observation tends to support the Program's emphasis on the importance of a student's first year of college work.

2) As previously suggested by the anaysis of Program graduates, quality points earned is a valuable index of student progress. A student's continuing performance, including grade averages, is more closely predicted by quality points per semester to date than by previous grade average.

3) For students attending the Summer Session, high school grades no longer predict first year college performance. Participation in the Summer Session may have a very different impact on individual students.

4) For students who are tutored, there is a strong positive relationship between tutorial attendance and achievement, especially as measured by credits earned. The benefits of tutorial

attendance are dramatically stronger for students who attend the Summer Session than for those who do not.

Questionnaire Results

A separate component of this study was a survey of students' family and personal background, high school experience, and selected attitudes and values. A questionnaire was administered to all students enrolled for the Spring semester of 76.

Preliminary analysis indicates that current performance was positively related to a cluster of personal values suggestive of social responsibility (life goals involving opportunities for one's children, political change, intellectual work, help to others, and administrative responsibility) and negatively related to a cluster suggestive of hedonism (life goals involving freedom on the job, free time, friendships, and money).

Progress and Prospects

The National Project II evaluation has resulted in an internally derived and updatable table of overall student performance by which the Program's success with new students can be judged against its own history. Although strict causal inference is always a problem, it can now be clearly specified just how successful the students exposed to a particular experience have been. Critical points for future intervention can be readily identified.

In addition, further specification of the Summer Session's meaning and impact should be a first priority for future Program evaluation. Identifying probable Program effects would depend on distinguishing Summer Session students who do well from those who do not. Since past performance does not predict the first semester achievement of these students, more may depend upon their specific activities and experiences during the Summer Session. The Summer Session of 1977 should serve as an opportunity for testing ways to measure each student's progress and responsiveness during that six weeks.

COLLEGE ASSISTANCE MIGRANT PROGRAM
ST. EDWARD'S UNIVERSITY
AUSTIN, TEXAS

In 1972 the College Assistance Migrant Program (CAMP) was established at St. Edward's University, a private four year University with 1800 students.

St. Edward's is one of four colleges currently hosting a CAMP program. The others are Adams State College, Alamosa, Colorado; California State University at San Diego; and Pan American University, Edinburg, Texas.

CAMP was developed to provide young migrant farm workers with the opportunity to obtain postsecondary educational experiences and credentials that can enable them to leave the migrant trek and enter the nation's economic and social mainstream. The program provides eligible students with the financial aid, academic support, and personal assistance required for the first two semesters of college work. In addition, St. Edward's University guarantees to satisfactory students the additional funds needed for the second, third, and fourth years of college study.

The St. Edward's CAMP Program offers a formal education opportunity for one year for the migrant farmworker. Students participate in regular university classes and must meet the same degree requirements as regular students. Included in the program are experiences and opportunities for prevocational and vocational training, academic and social development, and meaningful work activities.

The CAMP Program averages about 112 students per year. Students' average entering age is 18.9, their family income is $4,029 and 82% are Mexican Americans. Dr. F. Eugene Binder and Richard Kinsey are co-Project Directors for NPII at St. Edward's.

A. CAMP PROGRAM

1. Recruitment

A total of 238 referral agencies throughout the country are working with the Program to help identify and attract qualified students.

2. Orientation

Pre-college summer enrichment program a) provides students with an awareness of university systems and subcultures, b) helps develop and enhance effective study skills and c) provides "catch-up" instruction in English, math and reading.

3. Student Skills

Selected upper-classmen are hired as facilitators to help CAMP students adjust to and overcome campus living obstacles during the first college year.

4. Advising

Students are interviewed prior to the beginning of their studies at St. Edward's, with advisors carefully reviewing students' application materials before the interview. Often several sessions are necessary to develop a viable schedule.

5. Tutoring

The tutoring program is mandatory and first semester students are required to atend four hours of tutoring per week, unless a student shows a "B" average by the mid-term.

6. Counseling

Students contract to meet bi-weekly with an assigned counselor.

7. Financial Aid

First year CAMP students are all awarded "total need" financial aid packages.

8. Budgeting

Students must submit monthly budgets and receive their allowances at the beginning of each month.

9. Summer Employment

CAMP motivates, prepares and assists students to find summer employment.

10. Contracts

Students are required to accept responsibility for their own actions by signing contracts which cover attendance, punctuality, participation in tutoring and counseling. Students are told they will succeed if they abide by the contract because past experience has proven this.

11. Developmental Courses

Non-credit courses are offered for students who need developmental reading, communication skills, developmental math and effective study skills.

Evidence of Success

Retention

Percentage of students completing the program each year:
1972-1973 = 54%
1973-1974 = 83%
1974-1975 = 89%
1975-1976 = 90%

Credits Attempted/Earned

Average of credits attempted first semester—14.63.
Average of credits earned—13.09.

B. RESEARCH PROJECT

In order to evaluate the effectiveness of the St. Edward's CAMP Project, research focused on the following objectives for the period from 1972-1976:

1. To determine the characteristics and performance rating of Project students, both high school and GED graduates, that can be used to predict academic success in college.
2. To compare the academic performance of migrant students with that of traditional university students.
3. To determine the impact of migrant students' educational opportunities and success on their parents and siblings.
4. To determine the effectiveness of the special tutorial and facilitator programs that were designed to assist the CAMP students.

C. METHODOLOGY AND FINDINGS

Characteristics and performances of students as predictors of academic success and a comparison of selected variables: CAMP and traditional students.

A study was conducted in which selected variables were examined, to determine their relationship to academic success in the first two semesters of college. This study was made to determine if standard predictors of success were less applicable to migrant students.

Academic success was indicated by a comparison of CAMP students to regular St. Edward's students' first year college GPAs, credit hours attempted and credit hours earned. The other student characteristics studied were: SAT scores, year of entry into program, sex, high school diplomas as compared to GED. From the results obtained, the following conclusions can be drawn:

1. High school grades seem to be the most accurate predictors of academic success in college for both migrant and traditional students.
2. SAT scores seem only moderately effective as predictors of college success, especially for nontraditional students.
3. Because there is so little variability in family income and educational background among CAMP students, they have only a low degree of accuracy as predictors of college success. (On this criterion alone, success in college would not have been predicted for any CAMP students.)
4. Regular high school graduates, both male and female, experience greater academic success in college than do GED graduates for both CAMP and regular students, yet persistence is relatively equal between high school and GED graduates.
5. Migrant and traditional college students on the average do not differ significantly in freshman year academic achievement.

The results show that CAMP students are able to compete successfully in college courses despite their poorer scores on the standard predictors of academic success. Data revealed that CAMP students perform better in their second semester, in terms of grade point averages and credit hours earned, and that they both receive and express the need for less assistance at this time. Apparently, even if they were not high achievers in high school, they can learn to cope with the demands of college rather quickly if they are motivated to do so and if they receive considerable initial encouragement and help. This finding holds true for both men and women. The implication, therefore, is that student assistance should be provided initially, enabling students to experience success from the beginning.

CAMP Inpact on Parents

To determine how the families of these students might be affected and to learn their attitudes toward the program, locally developed surveys (Parent Questionnaire, Brother/sister Questionnaire) were made of families of CAMP-affiliated students. Interviews were conducted with 108 families, in their homes, by eleven Spanish-surnamed, bilingual interviewers. CAMP

has a strong positive impact on the families of migrant students. From the demographic data it was apparent that a large majority of the parents had had little formal schooling. Apparently factors other than parental education were more important to youths from families that previously had little opportunity for extended schooling. One element is that the parents on the whole were very much in favor of education and of having their children acquire a college degree, particularly because it would improve their chances in the job market. It seems plausible that in the past, when there was no chance of attaining a higher education or often of even finishing high school, their attitude toward education was more fatalistic; only when the opportunity became a reality did the motivation arise to go with it. It also seems likely that there is a reinforcing cycle: as the sons and daughters of migrants show that they can succeed in college, the parents become more approving of education and even become interested in it for themselves and for their other children as well. Younger siblings are also influenced by the Program, for the college students provide the success model that often was lacking in migrant families.

Effectiveness of CAMP Special Assistance Programs

Student Facilitator Program

In order to assess CAMP students' perception of the effectiveness of the student facilitator programs, a locally developed questionnaire was administered to CAMP freshmen each year, from 1973-1975. In addition, feedback was obtained from CAMP staff and from student facilitators. Data obtained from the questionnaire show that the Student Facilitator Program has proven invaluable in helping students become oriented to college, answer questions, reinforce study skill training, and serve as liaisons between students and staff. Not only did the measures of performance indicate that the program was a success, but also the students themselves recognized its import, especially in helping them understand assignments and study skills, plan schedules, and provide someone to whom they could turn. The fact that many second semester students reported feeling "abandoned" by their facilitators and wanted to continue at least some contact with them, indicates the effectiveness of having competent and concerned peers work with their classmates and their importance in the role of surrogate family. Therefore, the findings imply that an authorized peer support system can provide the comfort and help that are so important for the success of migrant students in their first semester in college.

Tutoring Program

Research was also undertaken to assess 1) the effect of the tutoring program on academic performance 2) student satisfaction with the tutoring program 3) the effect of the experience on the tutors themselves. To determine the effect of tutoring on performance, an analysis was made of the correlation between number of hours of tutoring with grades received and credit hours earned by each student in the first and second semester of the program. On the whole, the greater the number of hours of tutoring, the higher the GPA and credit hours earned in the first semester, but not in the second. This suggests that after learning how to study and cope with class assignments, CAMP students become less reliant on support services.

Between 1973-1976 a locally designed questionnaire was administered to all CAMP freshmen each spring to measure student satisfaction with the tutoring program. The results show that students perceive tutoring to have a strong and positive impact. Tutor satisfaction was evaluated on the basis of subjective comments requested and received from the tutors at the completion of each academic year. The comments indicate that the tutors have taken their role seriously and many tutors themselves have benefitted from the program.

Summer Enrichment Program/Study Skills Test

The effective Study Skills Test is administered to new CAMP students during the summer orientation program. Analysis of test results and students' first semester GPAs indicate that the test is valuable as a predictor of academic success. Students who scored significantly below the mean for first semester students on the test, subsequently earned below a 2.0 GPA for their first semester.

The research project of the CAMP Program at St. Edward's University indicates that migrant youths, when provided with the opportunity to attend college and with strong academic and social support during their freshman year, are able to succeed in college.

RESOURCES FOR STUDENT LEARNING
SOUTHEASTERN COMMUNITY COLLEGE
WHITEVILLE, NORTH CAROLINA

Southeastern Community College is an open-admissions, two year college with 2,000 students, in the rural, coastal area of North Carolina.

The Fund supported program is Resources for Student Learning (RSL), a program for high risk developmental students. The program, established in 1969, emphasizes personalized instruction, dual teaching and counseling roles for its faculty and reality therapy principles involving student responsibility. The average age of entering students is 25 or younger, most students are from low income families and 64% of the students are white, 35% black. The program enrolls approximately 100 students per year.

The Project Director is Winnie Cooke.

A. RESOURCES FOR STUDENT LEARNING PROGRAM

I. Selection

Students are selected from the lower quartile of Southeastern's Freshmen class. Other criteria for selection are that students are from the bottom half of their high school graduating class, have taken a non-college preparatory track in high school, are graduates of GED or other adult high school programs, are out of school more than five years or are identified by a counselor as needing special attention.

2. Orientation

Before classes begin students are oriented to the Program and to college by spending three days in a retreat that is far away from the college campus. Workshops, led by RSL faculty, serve to introduce students to each other, to the faculty and to what will be expected of them in college. Activities are structured to improve self-concept and to introduce students to contracting. Orientation is continued in the Fall quarter in "Orientation 101" which meets twice a week. Study skills and personal adjustment are emphasized in this segment.

3. Personalization of Instruction

An attempt is made to match content, objectives, and cognitive style with the needs of the learner. Personalization of instruction is more than flexible timing for RSL students.

4. Use of Small Groups in RSL Classes

The small group approach is used in the RSL classes because it fosters a cooperative spirit and eliminates much of the fear of failure. This teaching technique builds on the strengths of the student as a resource and encourages greater involvement of the student with the subject matter, his peers and instructors.

5. Instructor/Counselor Role of Staff Members

RSL instructors build on an already established classroom relationship to help students learn to solve their problems. If the instructors are not equipped to handle the situation, then appropriate referrals are made. This dual role of instructor/counselor was designed because too frequently students believe that speaking to a counselor is a sign of inability to cope.

6. Use of Reality Therapy

The counseling and teaching approach used in the RSL program requires that students take responsibility for their own behavior. William Glaser's steps of problem solving "Reality Therapy" are used to develop an internal locus of control. All personnel including peer tutors are trained to use these steps.

7. Peer-Tutoring

An active peer-tutoring program supplements the classroom instruction.

8. Communication between RSL and College

Each RSL instructor is also a staff member in his own academic department within the institution.

9. Contracting

Students and faculty make their expectations explicit through commitments (sometimes written) which outline the responsibilities of each party. The contracting is introduced during orientation and continued throughout the year.

Evidence of Success

Persistence	Winter 1975 Number	Percentage	Spring 1976 Number	Percentage
*RSL	92	84%	87	80%
**Group I	48	78%	37	60%
***Group II	53	85%	47	76%

GPA	Fall	Winter	Spring
*RSL	2.34	2.37	2.36
**Group I	2.08	2.12	2.46
⅛⅛⅛Group II	2.60	2.40	2.62

*RSL - all students
**Comparison Group I - Non-program students with similar academic characteristics
***Comparison Group II - Sample of regular college students

B. RESEARCH PROJECT

The RSL research was designed to answer the following questions: Are there indicators in addition to persistence, that show RSL is effectively meeting the academic needs of its students? What are the reasons for the Program's success?

The RSL research project has three components. The first was a comparison of demographic, persistence and academic achievement data of RSL students with two comparison groups. Secondly, student and faculty surveys were conducted, and standardized instruments were administered, to assess the importance of different aspects of the RSL program. Finally the organizational structure and the success of the program in achieving its goals were evaluated by an outside consultant.

C. METHODOLOGY AND FINDINGS

Comparison of RSL students and regular studdents

RSL students (n=109) were compared to 62 similar, underprepared non-RSL students at SCC and 62 regular SCC freshmen with respect to demographic factors, academic achievement and persistence. The findings indicate that RSL students are succeeding; RSL students persisted as well as regular SCC students and significantly better than similar non-RSL students. There was no significant difference in achievement between the RSL and regular SCC students according to studies on GPA, Cooperative English Test, credits attempted versus credits earned, the number of students on Dean's List and Honor Roll, and the number of students on probation.

There was a significant difference between RSL and similar non-RSL students in GPA for the Fall '75 quarter. Although there was no significant difference in the Winter and Spring quarter, it is important to note that the similar non-RSL group lost more of its poorer students than the RSL group.

Tests administered were *Learning Styles Inventory, Norwicki-Strickland Survey* (a locus of control test), *Cooperative English Test* and the *Comparative Guidance and Placement Test.*

Present and past RSL students responded to questionnaires on the "Learning How to Learn Workshop", the tutoring program, modes of instruciton, instructors, and the program as a whole. RSL instructors identified the goals for their classes, evaluated their accomplishments, and made recommendations for improvement.

Results from the surveys show that both students and faculty believed "The Learning How to Learn Workshop" was one of the most important activities conducted by RSL. Students also believed the personalization of RSL classes was important to their success. Those who received tutoring believed the tutoring program helped them improve their grades. Additionally the results from the *Learning Styles Inventory* showed that the majority of RSL students preferred to work in small groups and thought it helpful to know their teachers personally. Orderly and well defined study plans were not important to the majority of RSL students nor did they want to set their own goals or work independently.

The RSL students believed the faculty and staff were interested in them personally and that a major reason for the success of RSL is the program's commitment to creating a "caring" atmosphere. Students also believed RSL has helped them in the personal and social parts of their lives.

External Evaluation

The external consultant found that the joint appointment of faculty to RSL and regular departments has allowed the program to have an identifiable image and, at the same time, allowed students and faculty to be in the mainstream of instruction.

The consultants also pointed out that the additional time and effort required of RSL faculty may cause faculty resistance to program participation in the future because of inequity of workload.

The National Project II research concludes that the underprepared student can compete successfully with the average Southeastern Community College student if he is given personalized attention from instructors, peer tutors, and counselors.

TEACHING CENTER
UNIVERSITY OF FLORIDA
GAINESVILLE, FLORIDA

The University of Florida is a public university with 28,000 students. Its Fund-supported program is the Teaching Center, a complex instructional system which includes computer generated assessment of student performance with an emphasis on immediate feedback to students, a tutoring program tailored to meet the specific needs of each course, and instruction in reading and writing skills as they are related to specific course content.

The program has 375 students enrolled per quarter. Their average age is 18.5, 95% are Black and the majority come from low income families. Entering program students score at the 40th percentile or below on the Florida 12th Grade Test, a state wide placement test.

The NPII Project Director is Dr. Jeannine Webb.

A. THE TEACHING CENTER PROGRAM

1. Selection

Program students are selected from a pool of admission applications from academically and financially disadvantaged students by the Director of Student Support and Special Program and an advisory board, based on the following criteria:

Graduation from an accredited high school with at least a "C" average, latent academic potential, determination and motivation and lack of financial support.

2. Personalized Instruction

Working with the staff of the Center, the course instructors develop performance measures (test-items) for units of the course curricula. The Teaching Center then assumes the responsibil-

ity for measuring the performance of the student, and offers special tutoring services to improve the students' opportunity for success on these measures.

3. **Classwork**

Students may enroll in special sections of courses which have the same content and objectives as regular sections. They attend lectures, use the same texts and interact with their instructors in the same manner as other students. Students are also encouraged to enroll in regular university courses as performance scores on tests increases.

4. **Lab-Assistants**

The student comes to the Center when he feels he is ready to test on a selected unit; he then answers a set of randomly selected computer-generated questions written by his instructor and his performance is *immediately* evaluated by a lab assistant who reports the results to the student.

5. **Standard Folder/Data Sheet**

A student's progress is recorded so that the student's progress can be reported to his instructor and tutor.

6. **Computer-Storage of Data**

Each day student achievement data is stored in the university's IBM 370 computer. This provides a data base for informed administration and management of the program. Weekly print-outs summarizing students' performance are sent to each instructor.

7. **Tutors**

A tutor, who is an upper division student, is provided for each course and section taught through the Center. There is a mandatory tutor referral if a student does not achieve designated mastery after a second attempt on a unit test. Tutors also work with students prior to testing sessions. Tutoring is done both on a one to one basis and in small groups.

8. **Non-Punitive Grading**

If a student fails to reach the criterion set by his instructor on his first attempt at a unit test, additional help is given and the test is attempted again using different items from the item pool stored in the computer. This process is continued until the criterion is reached.

Evidence of Success

Attrition rates were substantially higher for special admissions students before the establishment of the Teaching Center in 1972.

GPA

Almost 80% have a GPA of C or better.

B. RESEARCH PROJECT

The report was divided into two major sections. The first section was a longitudinal study of the special admission student and looked at his success in terms of retention, graduation, and choice of baccalaureate degree. The data were analyzed to provide answers to the following questions:

1. What was the pattern of course offerings in the Center?
2. What was the rate of utilization of the Center by students and faculty?
3. What was the retention rate for students using the Center?
4. How academically successful were students enrolled in Center courses?
5. In which subject areas did students have the most difficulty?
6. What was the pattern of incomplete grades for students?

7. Did Center course work relate to success in more advanced areas?
8. In which areas did the students major?
9. Did Florida Twelfth Grade Test scores predict academic success?

The second section reported the findings for the formative evaluation of the Center's activities. The formative evaluation was designed to provide information upon which to make changes in the policies and activities of the Center.

Four areas were selected for study:

1. The management system
2. Tutor effectiveness
3. Item quality
4. Client satisfaction

C. Methodology and Findings

Summative Evaluation

The Registrar maintains a computer-based file on students which provided data for a longitudinal analysis of the five groups of special admission students admitted from 1970-1975.

Utilization of the Center

The Center has diversified its course offerings over the years. The number of courses was doubled by 1974. New courses were added along with additional sections of existing courses, and students enrolled in an average of five Center courses during their first two years at the University.

Retention

Retention was determined by grouping the special admission students by the year in which they enrolled as freshmen. Retention rates are increasing for each year. For example, twenty percent of the 1972 students had graduated by 1976, forty-one percent were still enrolled, and thirty-eight percent had withdrawn. These statistics compare favorably to retention rates found among high achieving students at the University. The major difference between the high achieving and the special admission students was the reason for withdrawal. Thirty-six percent of the high achieving students who withdrew were in academic difficulty compared to sixty-two percent of the special admission students.

Grades

Grades for special admission students approximated the average grade points for all freshmen. Grades earned in Center courses were higher than those earned for other courses, perhaps because of the multiple testing opportunities offered in the Center.

Comparison of Special Admissions to Total Center Enrollment

Regular admission students were also enrolled in special admission courses. The proportion of satisfactory and unsatisfactory grades for special admission students did not differ from total Center enrollment except in mathematics where special admission students received fewer satisfactory grades.

Center Courses as Predictors of Success

The problem was defined as the relationship betwen the last course in a subject area taken through the Center and the first course taken outside the Center. Passing rates for the social sciences were uniformly high regardless of whether or not the students had taken courses through the Center; passing rates for biological science were uniformly low. In physical science courses, passing rates for advanced courses increased from 1970-1975 for students who took previous courses in physical science through the Center.

Major Fields

The greatest number of special admission students declared majors in the social sciences, with education second and business third. Interest in education declined while health-related fields increased in enrollment.

Florida Twelfth Grade Test and Grade Point Average

When all special admissions students were ranked on the Florida Twelfth Grade Test along with their grade point averages, no pattern was apparent. Achievement test scores did not predict the retention of students in the special admission category.

Formative Evaluation

The data were accumulated in the following manner. Records were kept on the number of examination administered daily and the length of time necessary to take and score examinations. The tutoring program was evaluated from records of the number of student contacts, the allocation of tutors' time, and the relationship between the number of tutoring sessions and course grade. Analysis was conducted for multiple choice items banks. Finally, a client satisfaction questionnaire was developed and administered.

Testing times.

It was apparent that some students in most courses take an inordinately long period of time to complete tests. However, the distributions of testing times were generally positively skewed.

Time needed for scoring tests.

Wide variability in grading times characterized most courses. Based on Testing Center policy, grading time should be at a minimum with little variability. This goal was intended to reduce the pressure on students and to increase the interaction between students and tutors.

Testing deadlines.

It was found that having a unit test available for longer than three-day periods resulted in the same pattern: the students tended to wait until the last day regardless of how many days were initially allowed.

Repeat testing.

Another problem in directing the student flow in the Center was related to the practice of repeating the same unit test on the same day. An anaylsis of the scores for those students who did repeat tests on the same day found that fifty-five percent of the time the practice did not benefit the student. Repeat testing over time did improve students' scores up to the third time the same test was taken.

Tutor effectiveness.

The data revealed that great variability existed in the number of tutoring sessions within subject areas as well as across subject areas. While more tutoring occurred in the physical science and mathematics areas than in the humanities and social science fields, it was not established that these differences were subject related.

The average number of tutoring sessions for each grade revealed a positive relationship between the number of sessions and the grade received. On the basis of the data, some recommendations can be made:

a) If the priority of tutoring on demand is maintained, greater diversity in job responsibilities should be established.
b) A greater effort at tutor training should be made. If well trained tutors do not maintain busy tutoring schedules, the allocation of resources to tutoring should be adjusted to fit subject area requirements.
c) Tutors should be responsible for identifying problem areas for students in the course content.

Item Analysis

The Teaching Center maintains item banks from which tests are computer generated. The item validation process revealed certain problems.

a) Additional data are necessary to complete item calibration.
b) The format of many unit tests was not designed for machine scoring. Extensive revision of some item banks is necessary if machine scoring will be viable.
c) Consideration should be given to the relationship between the difficulty of the item and

the objective tested. The possibility of passing an objective may be more related to chance, i.e. the difficulty of the item that is generated, than to the actual mastery of the content.

Client Satisfaction

The survey questionnaire was constructed in the attempt to answer the following questions:

a) Do users find the management function of the Teaching Center satisfactory?
b) Is the tutoring component beneficial to the students?
c) Do users like coming to the Center?
d) How do students plan their testing?
e) Did orientation relate to student attitudes toward the Center?

A comparison of the structured part of the questionnaire to the unstructured part (comments section) revealed that the two areas were roughly equivalent. More than half of the comments in both cases were positive. The most positively perceived area in both cases was tutoring. The greatest number of items in the structured part of the questionnaire was directed toward the management procedures; the greatest number of comments in the unstructured section was also concerned with procedures. Students liked the retesting opportunities and the immediate feedback of test results. There was some negative feeling about the lack of privacy in the grading area.

RESEARCH AND PROGRAM EVALUATION: SOME PRINCIPLES, PRECEPTS, AND PRACTICES

I. Introduction

Over the past ten years the profession of program evaluation has emerged out of the various social science disciplines. While there have been some differences of opinion, there is an increasing consensus that while program evaluation may use the methodology of the social sciences it is not confined to this methodology.

Program evaluation in some form is inevitable. There is no chance that a program will be developed and put into place without its founders, funders, directors, and participants having opinions and feelings about it. The only question is whether these opinions and feelings are based upon systematically gathered data and are consciously arrived at using some planned process or whether they are simply *ad hoc* and unconsciously developed.

In a survey of practices in program evaluation, Ball and Anderson[1] examined some 200 educational programs divided equally among the Department of Defense, other federal government departments and agencies, private industrial and commercial enterprises, and junior and community colleges. They found that most of the Department of Defense, other federal government programs, and private sector industrial and commercial enterprises were receiving some form of program evaluation. Most of these evaluations involved questionnaires of teachers and students to obtain evidence on their perceptions of the program. However, it was very clear that the traditional formal educational institutions—the colleges—rarely indulge in program evaluation in any formal sense of that term. It seems that once a program is installed at the college level it becomes sufficient unto itself or "functionally autonomous"; and it is unlikely that any formal effort will occur to gather evidence concerning the need for program modification or continuation.

The National Project II associates were all involved in systematic, conscious program evaluations. They used a variety of technical methodologies that are familiar to the social sciences as well as other less formal and less technically sophisticated methodologies that nonetheless are perfectly legitimate in the context of the evaluation of action-oriented programs. The range of techniques, for example, encompassed the work of Marquette University in its evaluative research using a relatively sophisticated multiple regression technique in order to examine the best predictors of success in the program. On the other hand the Institute for Services to Education as part of its evaluative research conducted a case study in which a content evaluation of letters and documents, supplemented by a study using questionnaires, became the basis for an honest and clear historical reporting of the process and progress of its program. And in the tradition of institutional evaluations (accrediting processes) Southeastern College, as part of its evaluation, had conducted a thorough, expert external review of its program.

We wish to emphasize that the major function of program evaluation is to provide information for decision-makers. Evaluation assumes current or past program development; it offers to extend our knowledge about specific program practices; it provides immediate payoff without necessarily providing generalizable knowledge; but, above all, it is decision-oriented.

Because it is decision-oriented (in contrast to the knowledge-orientation of "pure" or "abstract" or "basic" research) certain additional criteria of quality become important. Timeliness of the results of program evaluation is important. If the results are to feed into decision-making they must be made available before the decision is made—and *when* a decision is to be made is usually a political or economic matter not bound to scientific niceties.

Relevance is a second additional criterion. The results must be relevant to the decisions to be made. The evaluator, unlike the pure researcher, cannot define the problem without regard for the audience for the results. If the decision-maker, on hearing the results of the evaluation, yawns and mutters, "So what!", then the evaluation, which may be scientifically rigorous and technically sophisticated, is without value.

[1]Ball, S. and Anderson, S. B. *Practices in Program Evaluation: A Survey and Some Case Studies*. Educational Testing Service, Princeton, N.J., October, 1975.

Comprehensibility is a third, related criterion of successful program evaluation. There are multiple audiences[2] for program evaluation and at least the major audiences need to be provided with a reporting of procedures and results in a form each finds comprehensible. Usability is jeopardized if comprehensibility is absent. We note that, among the National Project II evaluation reports, each takes pains to ensure that the results are clearly stated; and when technically complex techniques are used—as with Marquette or St. Edward's use of certain statistical procedures—the meaning of the results is made clear to the educated reader.

Thus, program evaluation provides evidence in usable forms to a variety of decision-makers; and a wide variety of techniques for gathering the evidence is used. In the following sections of this essay, these points will be elaborated upon. Two areas will receive special attention—the kinds of evidence, and the kinds of decisions to be made on the basis of that evidence.

II. Evidence (Hard vs. Soft)[3]

In general, hard evaluation is regarded as rigorous by its friends and trivial by its enemies. Soft evaluation is regarded as sensitive by its friends and unscientific by its enemies. A few brave people obliquely challenge these assertions, saying that there is no such thing as hard or soft evaluation—only hard or soft evaluators. Like most shibboleths (pet phrases that help distinguish adherents of different parties or sects from one another),[4] the terms *hard* and *soft* have often been applied thoughtlessly. In common parlance, a hard evaluation usually involves (1) a research design capable of discerning causal relationships; (2) the collection of data that are objective, reliable, and valid; (3) the analysis of these data by sophisticated statistical techniques. A soft evaluation usually involves (1) a research design that, at most, can point to correlationships; (2) data that are subjective and judgmental; (3) an absence of sophisticated statistical analysis of the data. (Many evaluations based on the case study method exemplify soft evaluation, as do many of the efforts carried out as part of an accreditation process.)

James C. Stone (University of California, Berkeley) in a personal communication has used the term phenomenological evaluation to label one kind of soft evaluation. Here the personal viewpoints, reactions, and experiences of participants are collected, and the interaction between and among them is documented; the process may involve logs, diaries, informal feedback, self-reports, and observations. The evaluator becomes a participant-observer in phenomenological evaluation, identifying with the participant and systematically recording his or her own reactions as well as those of the participants.

The degree of difference between hard and soft evaluation is shown in Figure 1, a simple scheme based on some of the major components involved. The hardest kind of evaluation (the front lower-left-hand cube) is a sophisticated statistical analysis of objective data obtained from a true experimental design. The softest kind of evaluation (the back upper-right-hand cube) is an unsophisticated statistical analysis of subjective data obtained from a nonexperimental evaluation design. In practice, evaluations may include a number of these "cubes"; and on the basis of the "cube," with the appropriate reasoning, a piece of evidence is established. Since evaluators will usually want to present a variety of evidence, evaluation might include both objective and subjective data; and some of these data may be presented at the descriptive level, while others may be subjected to a more sophisticated level of statistical analysis (e.g., multivariate analysis).

Extremists in the hard-evaluation camp view soft evaluation as indicative of soft-headedness and insufficient training on the part of the evaluator. They further agree that the results of a soft evaluation are not open to replication and that subjectivity is so rampant that it is impossible to tell what are legitimate conclusions and what are the formal statements of prejudgments or chance occurrences. Extremists in the soft-evaluation camp look with similar disfavor on hard evaluation. They claim that hard evaluations miss the essence of a program's

[2]There are many groups who may want to make decisions concerning a program. These audiences include, but are not limited to, government funding agencies, the program's director and developer, clients and potential clients of the program, and the community that provides the program's context.

[3]This section is based on an article: Ball, S. Hard and Soft—Shibboleths in Evaluation. In Anderson, S. B. Ball, S. and Murphy, R. T. *Encyclopedia of Educational Evaluation*, San Francisco, Jossey-Bass, 1975, pp 191-195.

[4]Scott wrote that knaves and fools invent catchwords and shibboleths to keep honest people from coming to a just understanding.

impact; ignore the variables that currently available objective measures cannot assess adequately; and are mechanistic, basing conclusions on statistical tests of relatively trivial data rather than on intelligent judgments.

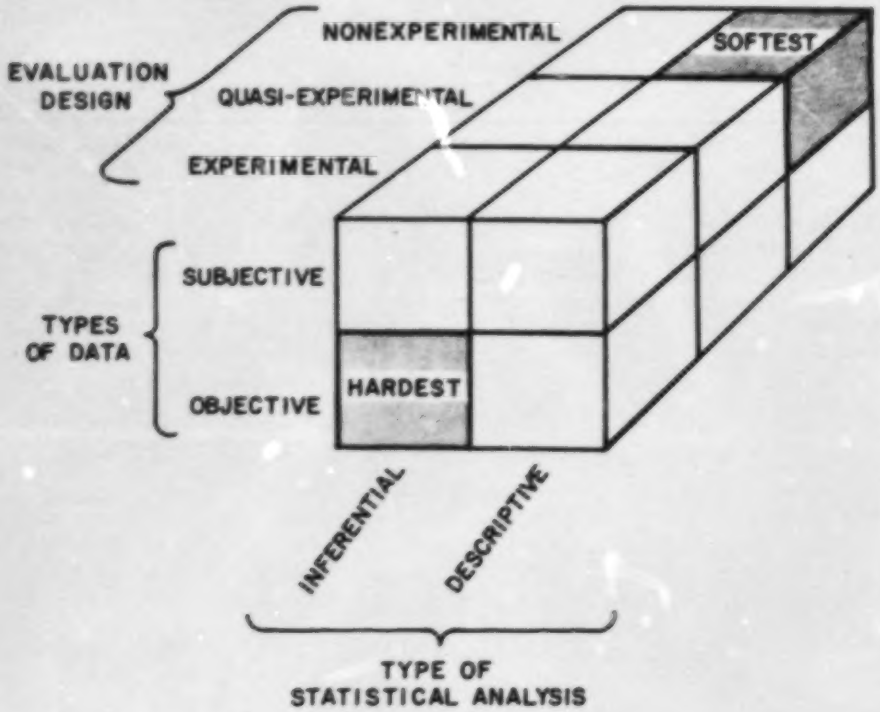


Figure 1. Components involved in hard and soft evaluations.

A major issue in all of this is the kind of evidence an evaluator finds acceptable. Which is a more acceptable kind of evidence: a statistically significant higher mean gain by an experimental group (compared with a control group) or a standardized achievement test, or a consistent report by the experimental students that they feel they are learning more? If there is no statistically significant difference between the achievement of students taught by Method A as compared with Method D, but teachers prefer to teach by Method A, which piece of evidence (which "cube") should an evaluator prefer?

The word acceptable implies that there is some purpose for the evaluation. Thus, the kind of evidence that an evaluator finds acceptable is in part dependent on what he wants to find out. (The term evidence is used here to include the data, design, and analysis.) If he wants to find out which method has the greatest impact on student attainment, he will not be substantially helped by evidence on teachers' preferences; if he wants to find out whether the school system is successful in retaining staff, he will not regard students' scores as useful evidence. In short, the evidence—whether based on objective or subjective data, whether collected within an experimental, quasi-experimental, or nonexperimental design, whether statistically analyzed or not—should be appropriate to the question being asked.

Furthermore, as evaluators we should obtain the best evidence that it is feasible to obtain. Considerations here include practicality and cost. Thus, it may not be practical to assign subjects randomly to treatments and construct a true experiment. Computer technology in a school system may not be capable of handling an analysis of covariance. The cost of obtaining objective observational data may be too great for the evaluation budget. Demanding a particular kind of

evidence that cannot be obtained is tantamount to saying that no evidence will be presented. Usually, it is better to have tried and gotten some evidence than never to have tried at all.

Finally, the questions about the technical quality of the data cannot be ignored; that is, whether the data are objective or subjective, they still have to meet reasonable criteria of reliability and validity. One must also demand that the design and analysis be properly carried out. An unreliable judgment in a case study is as bad as an inappropriate error team in an analysis of variance.

In general, the hard-versus-soft argument would suggest that objective measures are probably more reliable than subjective measures but that subjective measures may be more valid than objective measures. But this kind of argument can too easily be misinterpreted. Both objective and subjective measures must have sufficient reliability in an evaluation to ensure the possibility of obtaining reliable assessments accross groups. If we are assessing a relatively stable characteristic (students' achievement in mathematics, adults' skill in typing), an unreliable measure, no matter how "sensitive," cannot be valid. The presence of either validity or reliability cannot make up for the absence of the other. It is incumbent on both the soft and hard evaluators to indicate how reliable and valid their data are.

In short, it is imprudent to prejudge and stereotype "hard" and "soft" evaluation. These are extreme forms of a continuum that enmeshes design, data, and analysis. There are good hard and good soft evaluations (appropriate to the questions raised, feasible, and technically sound). And, just as clearly, there are bad hard and bad soft evaluations. But most comprehensive evaluations, of necessity, include both hard and soft components; and both are almost bound to find their critics as well as their praisers.

When we examine the associate's reports we see both "hard" and "soft" evidence, and we see generally that appropriateness is the key element.
Some examples:

...The Teaching Center of the University of Florida, among a variety of procedures, used structured and unstructured questionnaires to obtain student reactions, developed an improved information system to facilitate management control, and examined costs to determine cost effectiveness.

...The University of California, Fullerton, among its procedures, conducted a longitudinal survey of students who entered in 1972. A serendipitous finding was that it is very difficult to follow up erstwhile college students though obviously it is the long term impact of the program that is of greatest importance for certain kinds of decisions.

...St. Edward's University also tailored its evaluation to its decision needs by having a variety of procedures to provide evidence for a variety of decisions. Both academic achievement and student satisfactions were assessed (a breadth of evidence that is unfortunately too rare). St. Edwards also looked at cost effectiveness questions and asked and answered important questions about components of its special program.

...Marquette University, as with Florida, developed an improved information system to allow both better student tracking and longitudinal studies to be conducted. Marquette (also like Florida) used regular students as comparison groups. The question of control groups and types of experimental designs is beyond the scope of this essay; but it is clear that with ingenuity comparison groups if not control groups can be developed for certain types of evidence. Of course, if you want to know, say, the reactions of the treatment group the absence of a control or comparison group is of little consequence.

...Institute for Services to Education, as indicated earlier in this essay, carried out a diametrically different kind of evaluation in comparison with the four reported above. The use of archival records supplemented by questionnaire responses was the basic evidence used by an extraordinarily honest and apparently perceptive and objective evaluator.

...Southeastern Community College also used an objective external evaluator to obtain a set of important recommendations. Southeastern also used a second evaluation approach. A package of evaluation instruments (mainly questionnaires) was systematically applied to provide evidence on how best to modify the developing program.

...Bronx Community College showed a sophisticated concern for research design in an interdisciplinary evaluation effort or part of its extensive program. The evidence so obtained clearly showed the worthwhileness of the initial concerns and plans.

...Malcolm-King designed its own instruments and looked at future program developments on the

basis of past and present trends. This was sensible thinking since current performance is usually the best single predictor of future performance. Malcolm-King also used a pretest-posttest design to assess changes in the students. Other evaluations tended to obtain only post-treatment status which is a weaker form of evidence of program effects.

...College of Staten Island used four questionnaires mainly to obtain affective reactions to the program and affective impacts of the program. A comparison group of other Staten Island students was an additional feature strengthening the evidence provided.

In this section I have argued that many different kinds of evidence may be worthwhile in program evaluation and that much depends on the kinds of questions being asked and the resources and time available to answer the questions. I have also sketched briefly some of the kinds of evidence obtained in the National Project II studies. I now turn to an examination of the kinds of decisions to be made as the result of (or to some degree based on) the evidence gathered.

III. Decisions and Evaluations

Evaluations are undertaken for a great many reasons or purposes. These reasons or purposes mandate areas of involvement for the evaluator attempting to provide relevant information for decision makers. We have distinguished six major purposes or areas of involvement, and each of these six has been broken down into a number of components, as shown in Table 1.[5] Table 1 also includes a matching of evaluation purposes—components to likely general methods of investigation. Let us examine each of the six major evaluation purposes in turn.

I. *To contribute to decisions about program installation.* Historically the evaluation process has been thought of as beginning *after* the decision to implement an education/training program. However, a number of the skills and techniques usually associated with evaluation of existing or planned programs are applicable to what has been called "Front-end analysis." Assessment of the frequency and/or intensity of needs for a program, evaluation of the initial conception, and estimates of costs, operational feasibility, and demand and support are all important precursors to decisions about whether to implement a program and about the size and scope of the installation.

II. *To contribute to decisions about program continuation, expansion (or contraction), and/or "accreditation."* This purpose is the one usually served by what is popularly called "summative evaluation"; however, more is included here than is sometimes intended by that term. For example, investigations under Purpose II may involve some of the same components as investigations under Purpose I; after a program is in operation, it is important to monitor the continuing needs for the program (some of them *may* change or even go away) and to assess actual costs and demand/support. Results of these investigations need to be considered along with results of impact studies (focusing on both intended and unintended outcomes) in making decisions about program continuation, expansion, or "accreditation."

III. *To contribute to decisions about program modification.* This purpose corresponds to the one usually ascribed to formative evaluation, although information about program components can also be obtained after a program is in full operation and in the context of a global appraisal of its effectiveness. Of course, if a program is cast in an unchangeable mold, the evaluator is wasting his time seeking information to help make it better. A major distinction betwen evaluation efforts devoted to Purpose III, as opposed to Purpose II, is in the emphasis on describing program processes in contrast to program products. As Table 1 indicates, the evaluator may seek information to guide program improvement in a broad range of areas, including program objectives (e.g., validity and utility in meeting needs, popular acceptance), curriculum content (e.g., relevance to objectives, technical accuracy), instructional methodology (e.g., degree of student autonomy, pacing), program context (e.g., administrative structure, staff roles), and personnel policies and practices (e.g., student recruitment, instructor selection).

IV. and V. *To obtain evidence favoring a program to rally support* or *To obtain evidence against a program to rally opposition.* These two purposes are presented in recognition of the realities of program evaluation. Many evaluators shun evaluations with these purposes; many

[5]The content of this list of evaluation purposes benefitted from Scriven's (1974) "Product Check List." It should be noted, however, that Scriven's list is designed to be used primarily for appraising completed educational products or evaluation proposals, while Table 1 is intended as an aid to overall evaluation planning.

Table 1
Purposes and General Methods of Program Evaluation

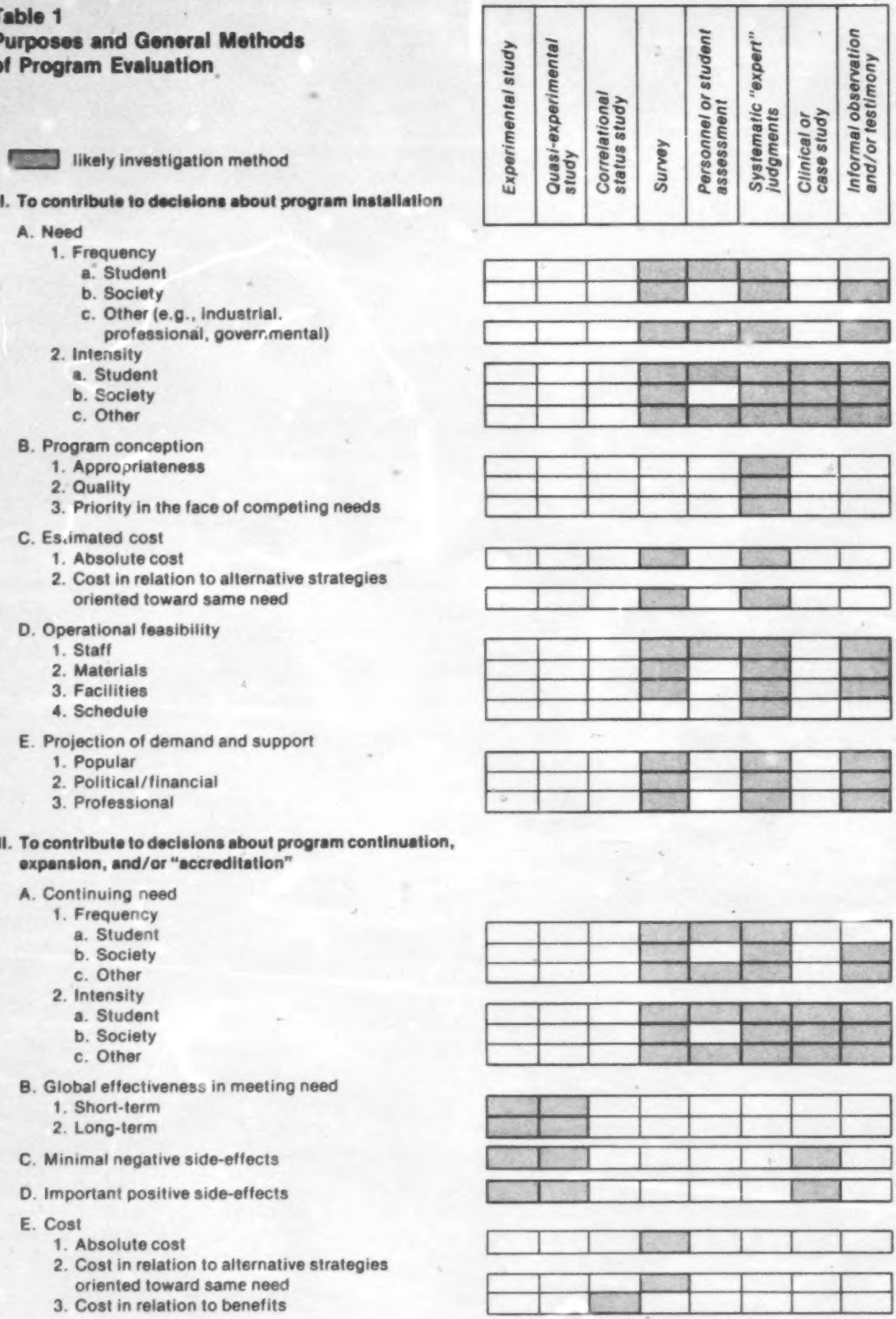
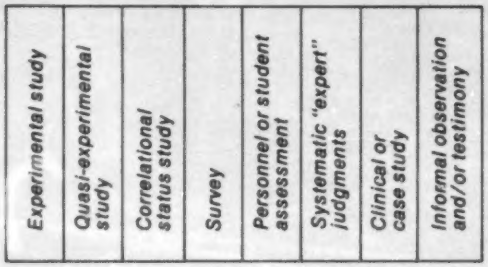


Table 1 (continued)
Purposes and General Methods of Program Evaluation



F. Demand and support
1. Popular
2. Political/financial
3. Professional

III. To contribute to decisions about program modification

A. Program objectives
1. Validity and utility (in meeting needs)
2. Popular acceptance
3. Professional acceptance
4. Student acceptance
5. Instructor acceptance

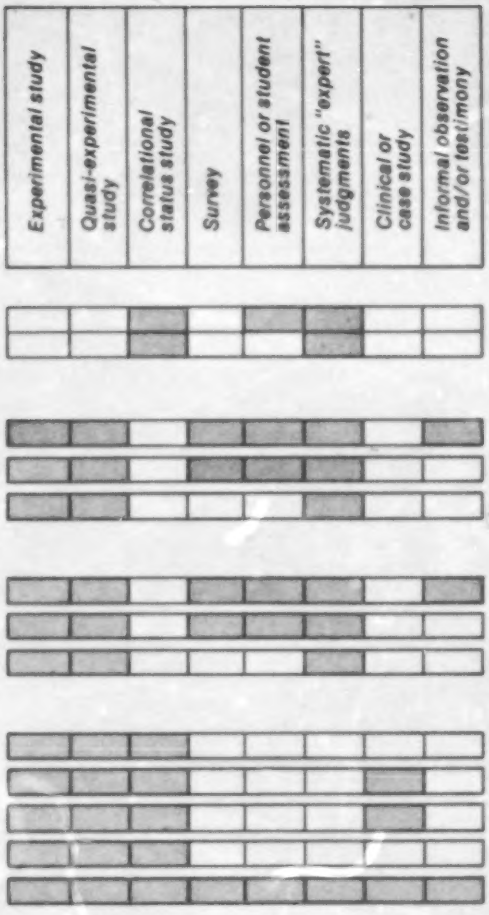
B. Curriculum content
1. Relevance to program objectives
2. Coverage of objectives
3. Technical accuracy
4. Degree of structure
5. Relevance to backgrounds of students
6. Effectiveness of components
7. Sequencing of components
8. Difficulty
9. Popular acceptance
10. Professional acceptance
11. Student acceptance
12. Instructor acceptance

C. Instructional methodology
1. Degree of student autonomy
2. Effectiveness of presentation methods
3. Pacing and length
4. Reinforcement system
5. Student acceptance
6. Instructor acceptance

D. Program context
1. Administrative structure, auspices
2. Program administration procedures
3. Staff roles and relationships
4. Public relations efforts
5. Physical facilities and plant
6. Fiscal sources and stability
7. Fiscal administration procedures

E. Personnel policies and practices
1. Students
a. Recruitment
b. Selection and placement
c. Evaluation
d. Discipline
e. Retention
2. Instructors
a. Selection and placement
b. In-service training
c. Evaluation for promotion, guidance, retention, etc.

Table 1 (continued)
Purposes and General Methods of Program Evaluation



people who "commission" evaluations are unwilling to admit to their real motives. But there are indeed occasions when decision makers must rally support for a program in order to sustain it, or opposition to it in order to "kill it" so that funds can be diverted to other things. And there may be occasions when decisions makers are willing to entertain both negative and positive evidence about the effectiveness of a program. The adversary model of evaluation integrates this purpose with the full thrust of the evaluation effort. In any case, it is better if the evaluator's client faces up to the real reasons for the evaluation and does not keep them hidden from the evaluator. The evaluator's responsibilities, in turn, include defining of clearly the nature of the evidence being presented, indicating its lack of representativeness if that is indeed the case, and ensuring the validity of the evidence even if it is only a partial picture of the total state of affairs.

VI. *To contribute to the understanding of basic processes.* Pursuing the purposes of a decision-oriented evaluation does not preclude investigating, within the context of the same study, basic processes in at least one of the disciplines listed under Purpose VI, Table 1. However, evaluators cannot afford to lose sight of the fact that the program must be the central focus. A search for understanding of basic processes can be a means to sharpen the focus of the investigation.

There seems little doubt that the National Project II associate's evaluations contributed to decisions about program continuation and expansion, program modification (Numbers II and III of Table 1). They did not bear particularly on decisions concerning program installation because these decisions had been made *before* the evaluators (and indeed National Project II) were in

place. Nonetheless, for completeness in this essay, we present the importance of developing evidence about program need, cost, (etc.), before installing programs.

Purposes IV and V of Table 1 are of passing relevance to this essay. Because the evaluations were conducted by the associates, Purpose V (rallying opposition to the program) was clearly not involved. Purpose IV (rallying support for the program) may have been involved to a minor degree. However, considerable contact with the associates and a reading of their reports show such an honesty and a strong wish to improve their programs that quite willingly they present their criticisms, secure in the knowledge that they have the opportunity to act upon this evidence if it happens to be unfavorable and so use it for the positive end of program improvement. When St. Edward's found lack of freshman student preparation a problem it instituted a summer program. When Institute for Services to Education found some of its member institutions treated the special program as a step-child born of soft money it recommended ameliorative procedures. When Marquette and Florida found out their information systems were inedaquate they publicly said so and took steps to improve the situation.

The final purpose presented in Table 1 referred to the research payoff of program evaluation. It seems obvious that there was such a payoff with the National Project II evaluations. Anyone interested in the underprepared student will find from reading this volume that a number of useful generalizations have been found and well documented.

IV. Some Concluding Comments

Program evaluation is a young, multi-disciplined, and some might add, ill-disciplined profession. We have argued here that it is an important profession because it attempts to ensure that decision-makers are provided the kinds of evidence necessary for wise decisions. It does not ensure that wise decisions are made but it certainly is an important facilitator. Flying blind is not a recommended practice in aeronautics even though it has been, as we documented, a typical practice in educational program development.

For the first time in terms of programs for the underprepared college level student, we have a set of ten program evaluations to be examined, discussed, and if only for historical reasons, cherished. However, there is much more here than historical treasures. Principles and techniques for assessing student cognitive and affective gains and responses, for improving programs, and for providing evidence of program impact are to be found here. Of course, that's my personal evaluation. Other readers can make their own. I hope they agree with mine.

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AFFECTIVE CONSIDERATIONS

Education, as a process and as an outcome is fully as affective as it is cognitive. This fact is so well-recognized as to be virtually a truism. The institutional reports of National Project II, therefore, can be anticipated to offer a large body of information on the complex roles of values and attitudes, motivations and feelings in the difficulties and successes of their programs.

But the impact of these reports can be blunted if the reader fails to note and reflect upon the special importance that the affective dimension receives when institutions reach out to win students from disadvantaged sources. Repeatedly, the project summaries indicate that an intensive and creative attention to affective considerations is the keystone of a successful program. The forces that shunt these special, disadvantaged groups of Blacks, American Indians, and Spanish-Americans away from higher education are deeply attitudinal; the counter-forces cannot be less so and be effective.

There are two major errors which can be made in conceptualizing the affective side of these special programs. Each is an error of analysis: one, overanalysis, one underanalysis.

The Error of Overanalysis

The error of overanalysis is to divide the thinking and planning into separate components of cognitive and affective functioning. This error can lead to programs which attempt a kind of "affective engineering" to win entrants into courses but which try to run these courses on a totally "business as usual" basis. The approach tends to produce social dynamics which divide the people who constitute the program. Counsellors, for example, are left to motivate and inspire the students, to return them to the cognitive learning experience with renewed zeal. But the faculty are remote from this process, concentrated on gains on tests or other evidence of learning productivity. The result is an overanalytic specialization that diminishes communication when it is most urgently needed, or that leaves to students the work of communicating among administrators, counsellors and faculty as these students move from one meeting to another.

Such overanalysis, as reflected in these reports, seems to arise from two sources. One is a genuine concern for academic standards. People are people, and it is difficult to tell the disadvantaged learner that he or she has not met some course requirement. The closer the programs come to responsibility for the learner as a total person, the greater the danger that it is easier to win credit here than in a regular program. The other source of concern derives from the emotional quality of programs as "in" groups. In many reports there is evidence of the special group identifications which can arise. There are references to a "family" atmosphere, to characterize the closeness, warmth, helpfulness and support which are developed. But social closeness and intellectual dependence are often antithetical goals. There is a clinical psychological component to anyone's experience of a "family" as a developmental stage, and the ultimate goal of an autonomous, productive, and adult contribution requires a respect for the individual without overconformity to the group. For many persons, the affective side of special programs has disturbing overtones and problems. They prefer an analysis into affective and cognitive, and they prefer to contribute cognitively which someone else tackles the affectivity.

These issues of standards and of group conformity are real sources of separatism within programs. They are not figments of imagination, either, but eminently real difficulties. All of the reports touch upon them to some extent; those of Southeastern Community College and the College of Staten Island are perhaps most clearly relevant.

Overanalysis, then, can foster compartmentalization of people. But it also obscures a fundamental truth about the changes in students that programs evoke: affective change is a consequence of cognitive growth fully as much as any experience of a social group. It is essential and desirable to give the disadvantaged learner a sense that there are people whose faith and support can be counted on. These social forces are vital and can change attitudes. But learning itself leads to the feeling of personal growth and mastery, and this cognitive source of an affective outcome is uniquely valuable in moving the learner to higher levels of motivation and maturity.

Underanalysis

What kind of underanalysis does one see in these programs? They seem to involve a failure to sense the stages in a learner's affective growth. Broadly speaking, there are three stages

involved as the student enters and moves through the program: 1) attraction 2) participation and 3) sustained commitment. In each of these stages there are affective and motivational changes, and these changes have similarities and common elements. The error of underanalysis is the failure to recognize the differences among them, to plan program activity without regard for changing emphasis. At California State University at Fullerton, for example, there was recognition of these stages. Because of the timing of the administration of a questionnaire, it was possible to see the impact of the program acceptance itself upon the students. Almost immediately statements of long-range plans and goals became more optimistic, in some cases with the somewhat paradoxical result that the disadvantaged students projected more successful futures than the normative sample of college freshmen reported by Astin (1976) and his associates. The program administrators recognized these findings as a positive indication of the attraction of students, but they also recognized that student participation, student engagement in the program's processes, is another phase. The revision in self-concept that comes from the sheer fact of acceptance at college was clearly a factor at the University of California at Fullerton. But the needs of the next stage, of winning participation, are needs to channel this psychic energy and bend it to the realities of program activity.

These reports are not clinical documents, and they cover such dimensions as cognitive gains and managerial problems. But they seem to indicate that the dynamics of the three stages are qualitatively different:

Attraction — A revision of self-concept; a move toward a new group, largely on faith, with risks of the loss of face and with a need to resolve the implicit "rejection" of older groups of family and friends.

Participation — An adjustment of self-concept to the standards of the group; an acceptance of program processes and people; an experience of intrinsic satisfaction and learning and in relating to others; a realistic confirmation that the program leads to desired and attainable goals

Sustained Commitment — A clear perception and an acceptance of the total amount of work required; a mature understanding of the natural feelings of frustration and impatience; a sense of being able to help others less far along than oneself; a sense of recognition for demonstrated attainments on the part of program sponsors.

Good programs provide elements which recognize these stages. They stress the factors that are central to the needs of the learner at a given time; recognizing the distinctions. Programs which fail to make these distinctions, which, in effect underanalyze the processes, may be stressing aspects of student motivation which are out of phase with student development.

The evaluation of affective outcomes and processes in the various programs has taken many forms. Not unnaturally, much of it is observational, based on the experiences of establishing and maintaining, renewing or modifying a program. Issues of faculty rejection, of student satisfaction, are often made salient because of some specific problem or controversy. Or the failure to retain students gives a dramatic and unmisinterpretable signal that something is awry with the affective side of a program.

The need for some more formal or regular approach to affective evaluation however, is clear within the reports. Programs such as these are too large and too complex to be "seen" by any single observer, however close to the operations he or she may be. There is the usual body of false assumption, personal bias, misinformation and misperception operating; people tend to remember what happened in the light of these personal distortions, and an after-the-fact analysis reflects the distortions. Further, it is the vocal, opinionated minority who tend to dominate discussions of how the programs function affectively. The informal survey tends to overrepresent these subgroups.

The result is that some organized system for gathering affective data is needed. This often presents problems. Cognitive assessment in our society—the giving of tests of achievement to demonstrate gains as outcomes of instruction—is widely practiced and accepted. As Jeannine Webb notes in her companion essay, this does not make it problem-free. But there is a capacity to reach for cognitive test of reading or mathematics and find it socially useful to administer it to the students.

The affective domain is not so well structured. Its most vivid examples smack too much of the office of the clinical psychologist, of ink-blots and ambiguous pictures, or of the probings of consumer market strategists. People are not as comfortable in the affective domain, and the

measures are not as well-established as their cognitive counterparts. Further, there is a great idiosyncrasy to programs for the disadvantaged. They are offered at institutions of different sizes and geographic location; they deal with groups who have in common a low probability of attendance at college but who vary in ethnic, racial, or cultural background; they emphasize slightly different goals, are sponsored by complexly different agencies, and although obviously derived from a common theme are not likely to be well served by some single "master" instrument which can be used by all.

This is not to say that there is no useful body of available instrumentation. It simply stresses the problem of devising a useful plan for affective assessment because the planning in this area is a more demanding activity, in some ways, than planning in the cognitive area.

Like all planning, attendance to the basic question helps: who will be assessed? What will be used? When will the assessment take place? Why is this being done? The lesser questions, such as where? or by whom? can be answered more easily. Who, what, when and why bear the brunt of the task.

The reports are of great interest in correcting oversimplified views of affective evaluation. *Who* gets assessed, in these reports, is by no means limited to the obvious group, the program's student participants. There is an extension to counsellors and to faculty, as might be expected. But beyond this, there is an assessment of administrators, and in at least one program—St. Edwards University—an assessment of parents and family. These reports strongly suggest that a program should be seen in a broad social context, and that there should be communication with all of the diverse groups which affect it and which are affected by it.

Yet another dimension of whom to assess is indicated by the development of reference or contrast groups, whose responses are compared to the program group to assist in evaluation. A number of institutions, such as Malcolm-King, compared the responses of their students with the national norms of surveys such as Astin's. But at the College of Staten Island, the People Center report compared PC students with a contrast sample of non-PC students, representative of other COSI attendees. The planning of affective or attitudinal assessment, then, will often extend to other groups whose primary function is the generation of baseline data for evaluation.

What is used? A variety of measurement approaches are reflected. Not unnaturally, the basic approach is the questionnaire, a collection of questions, usually aimed at attitudes toward the program, toward the self as learner, etc. In many cases these instruments are *ad hoc* developments of the institutions and programs involved. This pattern seems likely to continue, in view of the idiosyncratic nature of each program. There will continue to be a need for questionnaire development tailored to the needs of each special situation.

Readers who plan affective assessment on their own, then, can be encouraged to consider the instruments that exist. However, there are some special problems in characterizing the content of affective materials, and users should try to read and study the actual measure rather than relying upon the label alone. Marquette University, for example, used as part of its evaluation a "hedonism" scale abstracted from the Freshmen Survey of Astin. But "hedonism" is only a general label for the life values reflected in the items, and in some ways a pejorative or negative one. What is involved is a need for warm and sustained social life rather than any appetite for wine, women and song, or muscatel, men and music.

While questionnaires and paper and pencil approaches are the typical information-collecting strategies, other major approaches include interviews, observational data and content analysis. Interview strategies seem a natural approach in the systematic people-oriented support activity that characterizes these programs. Formal counsellor interview schedules are provided by several studies, and summaries of the results form the basis for a number of reports. Interview approaches are labor-intensive of course, and will probably not be cost-effective for groups other than the students themselves, who must be dealt with in any case. There are no detailed reports of the use of interviews in the design of questionnaires, but this application can have obvious benefit. In reaching parents, for example, the conduct of a few structured interviews using the draft questionnaire can help to avoid painful miscommunication and to sharpen and strengthen questions.

Observational data in these reports tends to be exploratory and anecdotal. For example, for several programs a higher level of mutual sets of assistance and support among students was considered to be an indicator of program effectiveness. There was little systematic summarization, however, supporting an objective conclusion. It should be remembered that the ten programs tend to be fairly new and to be evolving and developing new structures. In such contexts it

is understandable that formal programs for behavioral observations are difficult to establish. But there are strong themes of group solidarity that underscore the rationales for these efforts. Stated in the abstract they become unobservable psychological events, private mental acts hidden within the individual. But translated into behaviors they become social acts, observables, quantifiable in ways that show change over time. They are stronger components of an affective evaluation if they are well-counted.

Content Analysis

Content analysis is a natural for such programs. As a method, of course, content analysis is simply the summarization of written or spoken statements, and can be used to codify interview protocols. Several programs drew upon content analysis to summarize the results of open-ended questions which were "tacked on" to questionnaires consisting of multiple-choice response techniques.

Content analysis has the great advantage of defining domains of people's concerns, of verifying the program's sense of what really matters, or of correcting it. If the material being analyzed, for example, is responses to a fairly general question such as "What did you like best about the program?" or "What did you get out of the program?" the range of answers received can frequently clarify perceptions of what is governing program functioning.

Content analysis is often conceived of in terms of statistical summaries, of proportions of respondents stating their response in various ways. These basic statistical approaches are useful and they are in a sense, the classic application of the method. But a briefer approach, relying on judgments, can be very useful simply to summarize the major outcomes.

A representative content analysis among these studies was that of the University of Florida, which categorized responses to open-ended questions at the end of a formal questionnaire. A first break-down simply considered comment as favorable or unfavorable. A second level of analysis considered the program component under consideration: staffing, procedures, facilities or other.

The University of Florida report instances another practice in connection with content analysis which can be of great value. This is the quotation of respondent comments as well as their summarization into categories. These quotations are admittedly selected by the evaluator, and they are not objective but they serve to characerize respondents thinking in their own words. The quotations lend force and color to the content analysis in ways that statistics cannot.

One source of material for content analysis, is the group discussion. This approach is best combined with a complete recording (video tape, if possible) and with several observers. It is commonly used as a leaderless group discussion to appraise interpersonal effectiveness among the participants, but it can stimulate a sizable body of relevant material for the question under consideration. An unassuming moderator, sparking the discussion through prepared questions, can draw out considerable material. The problems with the method are the tendency for vocally facile individuals to dominate the conversation and the possibility of friction among participants on points of controversy. But for individuals who have been in a program for a while, the method can offer a highly productive yield of insightful comment. It builds in intensity as the dialogue draws more and more on complex memories of participation. Among the present reports, that of Malcolm-King College, describing the outcomes of counseling seminar observations is an example of the approach here projected.

Content analysis in the current projects proved of considerable value in the Thirteen College Curriculum Program of the Institute for Services to Education. Here, its application was somewhat remote from students. The consortium concept that underlay the TCCP itself was being evaluated, with a major effort to reach the top administrators of the programs and institutions and to summarize their news on the operation and success of the TCCP model. The power of the method in the setting of such an able, articulate and well-motivated group was clearly demonstrated.

When to collect data is a critical decision, obviously related to purposes and to the why of assessment. In general, the critical points for students can be built around the phases of attraction, participation and sustained commitment. As students move through these phases, there are more or less natural inquiries.

Many of the programs here considered were too small and too flexible to lend themselves to formal evaluation. What can be retained is an awareness that affective results can no more be

reconstructed after the fact than can cognitive ones. People can say how they felt at the moment of program entry, if asked later on, but there is an obvious fragility to these recollections. The moral is to try to capture some understanding of affective states early on, particularly if there is an effort to demonstrate affective growth and change as concomitants of program strategies.

Instruments administered early in the program will explore feelings, motivations and attitudes. Instruments at the end of the participation phase will explore program experiences as they are perceived by the individual student. Instruments in the sustained commitment phase must focus on the threats to commitment: the money problems, schedule problems, boredom, and other factors that cut into student drive. There will be shifts in emphasis, accordingly, with some material retained for comparison purposes from stage to stage but with some new material, appropriate for the later developmental stage, also introduced.

There is a natural tendency to contrast groups over time. In doing this, there are some inherent problems in evaluating changes. Programs for the disadvantaged suffer severe attenuation, a selective process which reduces the group by principles not clearly understood. Comparing "the group" now with "the group" then can be comparison of different people. Even if this difficulty is recognized and avoided, the affective domain is subject to vagaries that cognitive measures seldom face. More so than cognitive measures, affective instruments can become vehicles for a discharge of wholesale negative responses, so that a disaffected respondent takes extreme and negative positions on all aspects of a program through disenchantment with some single part of it. Responses gathered from participants who leave the program shortly after may well be examined for this phenomenon, and if severely flawed, disregarded.

The Value of Affective Assessment

Even in the absence of the various formal values for affective assessment, it carries an intrinsic value that recommends it. An affective assessment bespeaks a concern for the way people feel about themselves and about the program. When St. Edwards reached out to contact parents, it characterized its program and its values in a uniquely powerful way. Measurement strategies can be burdensome. It is apparent from these studies, however, that brief but effective opportunities can be offered to allow people to express themselves. These efforts can operate reflexively to give students greater insight into the realities of the affective demands they are placing upon themselves. All too often the individual is too deeply caught up in the problems of his or her individual situation to maintain a perspective. Failure, doubt, and problems are seen as unique to and deriving from oneself. Affective assessment can be a helpful technique for implicitly reminding students of the commonalities of the challenges and feelings they confront.

This relates to another subsidiary question: For whom? There is a tendency to see the results of evaluations as dry and technical, as perhaps too impersonal in tone or too candidly reflecting the goals and values of appraisers to be disseminated back to the people whose responses they characterize. In all probability the major evaluative report is not fully appropriate for the respondents. But there is a great value, particularly in the affective domain, to a report which provides descriptive feedback to the students. In the current series the Staten Island Community College report on the People Center for 1976 comes most clearly to mind. Extensive portions of this report are descriptive compilations, profiling the "typical" PC student and the non-PC counterpart. These summaries, as outcomes of respondent cooperation, can be fed back to the students, perhaps through newsletters. How many work while studying? How long does it take them to get to school? Students are interested in this type of feedback, and there is a valuable implicit message in such reports. It says that the data collected have not gone off to some mysterious, distant world of administration for private evaluation, but are available, used, being reacted to. Further, they help students to heighten their own awareness of their points of similarity to or difference from their peers.

The Bronx Community College report instances one other aspect of affective assessment—the scaling of responses. Measures of affective response leave no zero point; they are "anchored" in various ways by respondents, hopefully in ways influenced by the instructions. In gathering evaluations in global terms, appraisers should try to get a sense of the basis for response. If a certain note of idealism is sounded, the respondents may seem negative, as they contrast the limited but real attainments of programs with the needs or possibilities. A kind of false negative response can be sounded if this is the case. The basis for judgment, then, the scale upon which it is based, is critically important for its interpretation.

The overall effect of these studies conveys the critical role of affective considerations in programs for those who would not usually attempt or succeed in college. The role of measurement in monitoring and evaluating the affective character of an activity is clearly demonsrated. Further, the catalytic nature of affective assessment, its intrinsic contribution as a source of communications which foster group cohesion and as a tangible expression of values which stress the importance of individuals is made clear. Affective assessment is a vital element to clear communication about the program and within the program.

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NATIONAL PROJECT II
PROGRAM EVALUATION: COGNITIVE ACHIEVEMENT

A systematic evaluation of academic programs which examines cognitive achievement of students in colleges and universities must contend with obstacles of sizeable magnitude. Historically, program evaluation in higher education has focused almost exclusively on securing the collective opinion of representatives from power groups, associations, or accrediting bodies to the effect that the institution and its instructional programs are meeting standards. These standards usually employ criteria which either are not related to student learning or do not lend themselves to precise measurement. The quality of a given institution and its academic programs has been largely a matter of reputation, based on crude comparisons and estimates of student ability, alumni success, and the prestige of its faculty. Such evaluations by reputation are both reflected in and encouraged by the ratings given by regional and national professional groups and associations. Furthermore, there is a tradition in higher education, interwoven into the concept of academic freedom, that it is somehow unprofessional for a faculty member to criticize, interfere with, intrude upon, or even observe another professor in his classroom. Any systematic evaluation of the teaching-learning process and its outcome, student achievement, is not a practice which has enjoyed wide popularity in post-secondary education. Not only is there no tradition for it, there is a strong tradition against it.

Consequently, as programs for the educationally disadvantaged or underprepared students have been developed and implemented in colleges and universities, including community colleges, during the past decade, there were found no established models or procedures for providing objective information about student achievement in the evaluation of these programs. Because innovative and non-traditional programs for the under-prepared student are new (only one of the National Project II programs was in existence before 1970), often instigated and partially supported by federal rather than local agencies, and under tremendous pressures to prove themselves to gain a share of dwindling local resources, they have not had the time which traditional programs have had to establish reputations of adequacy or excellence. It is hardly surprising, then, that the Associates of National Project II have turned largely to such measures as retention rates, grades, and standardized test scores to estimate the impact which their programs have had on the academic achievement of the special student they strive to support. Therefore,so me of the most intriguing questions as how these programs succeed,as indeed they do ,in helping st udents overcome obvious deficiencies in academic preparation and comp pete with their better prepared peers cannot be answered directly. However, within the final reports of each of these program evaluations there are underlying currents, which, although dimly seen, begin to evidence patterns for others to follow in program development or to generate hypotheses for others to test.

One commonality which each of these programs share has been that each was developed in response to a pressing need of the institution. No program had the luxury of a lengthy and leisurely planning period in whch careful evaluation procedures and data collection systems could be designed to measure the outcome dictated by its goals. Rather, programs sprang from the needs of the special student, with staff often working long and hard to meet the day to day demands of designing and implementing curriculum changes. There was little or not time to even describe these for others let alone monitor or evaluate the outcomes. Thus, each program has relied on *ad hoc* evaluation procedures, carrying out a backward search of institutional records to develop data bases to trace the impact of the program on student learning. In several instances an important outcome of the program has been to develop systems of data collection in which the monitoring of student progress through the institution has for the first time been possible. The most important commonality, however, is that in each of these programs the emphasis has been not to develop a parallel program in which the special student would acquire different skills and information than the rest of the student body. Instead, through special instructional procedures, curricula or remedial courses, emphasis has been to help the special student make up academic difficiences with which he entered the institution.

For most institutions in National Project II the first question which must be asked in an evaluation of their program is: Did the student survive in the institution?

Retention

Each of the National Project II Associates programs has considered retention. Retention has usually meant survival through the initial period of enrollment or the freshman year, and has served as a primary goal throughout the project. Several Associates have stated or inferred that a rate superior to the national average of fifty percent or so should indicate success. For a student who by traditional criteria often does not have the academic skills or goals of the regular college student and who finds himself in a strange and seemingly alien environment, persistence has been seen by most of the projects as a sound measure of his achievement and growth toward the goals of the program.

In the case of St. Edward's University in Texas, whose program is for the children of migrant farm workers, the evidence that the program students survive an initial summer program and complete the fall and spring semesters of the freshman year in increasing numbers each year is seen as important documentation of the effectiveness of the program. Marquette University, California State at Fullerton and the University of Florida have gone beyond examining the retention rates for entering students and tracked their program students through the general education portion of the curriculum on to the senior year and baccalaureate degree. Tracing the progress of a special group of students from their entry as freshman to their graduation four to five years later proves to be a complicated task, especially in large universities. Enrollment patterns of regular students no longer follow the traditional criteria consistently for predicting success in college. The patterns of persistence in college indicate that many students drop out from time to time and that the period for earning the baccalaureate degree may be closer to five years than four in any event. This was the finding at the University of Florida. Therefore, if the special student persists, taking three years to complete a two year program or five years to earn a degree in a four year college or university, he not only is succeeding but he is doing so at a rate not too different from his more advantaged peers.

Both the staunchest supporters and the strongest critics of programs for the educationally under-prepared seem quick to point out that retention in itself as a measure of student achievement has questionable validity. They would place upon these programs the burden of providing more specific and direct evidence that these students are indeed acquiring the cognitive skills and information long associated with institutions of higher learning. The evaluators of the programs of National Project II have rejected this onus and rightfully so. Aside from a handful of competency-based programs scattered throughout the country, no college or university provides this information for any of its students. Achievement is measured by units earned of course credit. In order to remain in school and ultimately earn a degree, diploma or certificate, the student must earn the required kinds and amounts of credit. Credit is the evidence which we have traditionally honored as proof positive that students have learned and achieved the goals set by the institution. Therefore, if a student remains in school, making progress towards earning the units which are required for a degree, he provides the time-honored evidence of success. Until institutions of learning move from the position that their product is the number of credit hours generated and degrees granted to the concept that their major responsibility is to provide evidence of cognitive gain of their students, persistency towards earning credit and ultimately degrees will continue to be a most important measure of student learning. Why should Project II students be held to different or more stringent standard?

Grades

Persistence by the student and retention by the institution of this student is a gross measure of student cognitive gain. It can be qualified by the grades a student earns, by comparing the number of credit units attempted by the number of credit units earned, and by tracking student performance through a series of courses or experiences for which success at latter stages is contingent upon learning specific skills at earlier stages.

Quality of student achievement beyond survival for all students is generally determined by grade point average. The ubiquitous GPA is an acronym that carries meaning for everyone who is even remotely associated with post-secondary education. Based on formulas which equate letter grades of A, B, C, D, and F to numbers, usually 4, 3, 2, 1 and 0, an average is derived by totaling the number of points (usually called quality or honor points) by the number of hours enrolled. These averages are re-computed at the end of each enrollment period and become the

quantified measure of the quality of student progress. This average is usally carried to two decimal places and is the measure which identifies the entire range of students from the honor student to the student placed on academic probation. The academic establishment uses these numbers to make decisions about students, seldom blinking an eye to the absurdity that although a 2.00 (C average) reflects satisfactory achievement, a 1.99 is an indication of failure or an unsatisfactory progress record. The numbers are absolute and used with precision although the process by which the letter grades and hence the quality points are assigned is a result of the subjective and seldom explicated decisions by the faculty.

The process of grading or making decisions as to the quality of student learning or lack of achievement is based upon criteria, often internal, which each teacher establishes. Thus the GPA becomes the measure of the collective judgement and opinion of the faculty whom the student encounters. Although the psychometrician may quail at the idea of such imprecise measures becoming combined to make decisions about a student's survival (and hence, his cognitive growth), this is a system deeply embedded in post-secondary education and questioned by few.

The Associates of National Project II have looked at GPA, quality points, and the relationship of credit hours attempted to credit hours earned in order to provide evidence of the cognitive gain of the students in the special programs. The criteria of success has been the 2.00 or better GPA which represents satisfactory progress supposedly or average achievement. Thus, in each program, the special student has been compared with his regularly admitted peers, using the same traditional performance measures.

That such high percentages of high-risk students in National Project II programs earn GPA's of 2.00 or better is a remarkable achievement. In most institutions, aside from a special summer session or a limited number of remedial or basic skills courses, the program student enrolls in the same courses and competes with the regular student to earn that GPA. For instance, at St. Edward's University the young migrant workers are placed in courses in every curriculum of the University with regular students, some of whom share the same Mexican-American heritage, and are taught by the general faculty. Over a period of several years, these migrant youths have maintained a 2.40 GPA at the end of the first semester which compares to the regular freshmen who report at 2.70. At California State at Fullerton, which reports a retention rate of 48%, those students still enrolled after four years have maintained a GPA of 2.24. University of Florida students earn GPA's of approximately 2.50 by the end of their first year and few withdraw during their junior and senior years because of academic problems. And so it goes. In each of the National Project II institutions students learn and achieve, basically at close to the same rate (institutions which reported comparisons between credit hours attempted to credit hours earned found little discrepancy between the two) and almost at the same level of achievement as their peers and within the same degree programs.

In a slightly different approach to assessing student learning, the Associate at Marquette University attempted to identify predictor variables for continuing academic progress of special students. This evaluation reports a finding that the accumulation of quality points better predicts achievement than GPA or number of hours earned. At Marquette it was suggested that the educationally under-prepared student's chances for success may be improved if he reduces the number of credit hours he attempts in order to achieve high grades in basic courses. Logically, this is not a surprising finding. A sizeable body of research in Personalized Instruction (PSI) indicates that if the task is held constant, the time needed for students to achieve the task will vary with individual learning rates. If a student enters a program with an initial handicap in traditional academic skills, his achievement can be enhanced by providing him with additional time to meet the demands of general education courses. What seems surprising is the number of students in each of the National Project II programs which succeed at the same rate (number of credit hours attempted) as their more educationally advantaged colleagues.

Another approach to assessing student gain by tracking student achievement vertically through the curricula was reported by Malcolm-King College and the University of Florida. In each program, students were traced through a series of courses in which success in later courses was dependent upon acquiring the information or skills included in the earlier courses. Malcolm-King placed students in a series of remedial English courses which lead to freshman level English. Each course has performance objectives which students must meet. A retention rate from one level of remediation to another of over eighty percent was reported. At the University of Florida, the grades of program students were monitored as students moved from

general education to upper division courses. Within disciplines, particularly in the natural sciences, students who participated in the program performed better than their peers at the more advanced levels.

Whatever the variation of approaches, the theme has been clear. The Associates of National Project II have used the grades students earn as the evidence of the quality of their cognitive gain. Because each of these programs are designed to supplement regular curricula rather than providing separate and discrete academic programs, these measures would seem legitimate evidence of the remarkable achievement many of their students have made.

Standardized Test Scores

Several of the National Project II Associates looked to pre- and post-testing of program students with standardized, norm-referenced tests as a measure of student cognitive gain. The hazards of this technique are well docmented in the literature of educational research. In addition to the inability to control variables beyond the scope of the program, program evaluators often find standardized tests, because of their broad-range purposes, not to fit the curriculum or the special abilities of the program student. In addition, standardized tests, especially college admissions tests, have been found to be notoriously poor predictors of success in college for the population for which National Project II programs were designed. High correlations between college admissions tests and standardized tests in reading and mathematics would lead one to expect that National Project II students would also fare poorly on these measures.

Even so, several institutions were able to document increased reading scores for program students. Both Oscar Rose Junior College and California State at Fullerton reported almost two year gains (from ninth to eleventh grade performance). Additional analysis of the data at Fullerton also found reading gains correlated positively with GPA for students who attended classes regularly. Reading gains alone did not account for academic achievement. Achievement occurred only in tandem with the students' determination to persist. Malcolm-King reported a puzzling finding. Entering students in 1975 moved from the lower to the middle range of reading scores on national norms and achieved a mean score close to the national average. The following year, with much the same population and the same treatment, entering freshmen scored substantially lower on post-test measures than on pre-test measures. The report did not speculate on the conditions which may have affected these findings; however, if students were aware that course grades were not dependent on test scores the decrease in scores may well reflect their lack of interest and distaste for standardized tests. This is not an uncommon phenomenon. College students in general show less than enthusiastic response to standardized examinations and special program students who have found them demeaning are especially resentful of them. Valid pre- and post-measures are difficult to obtain for any college student population unless grades or some other tangible rewards are contingent upon the outcome.

An interesting experience which illustrates the problems inherent in standardized tests was found at Bronx. A standardized achievement test in arithmetic was identified which corresponded to the objectives of a remedial mathematics course offered to special students. In an attempt to develop local norms and to develop an equivalent form, a study was made of pre- and post-test scores for two different groups of students. However, because so many students failed to attend the post-test administration, the numbers of subjects was so reduced that firm conclusions could not be drawn.

The findings of the project reports are not consistent in terms of student gain based on the results of standardized tests. What does seem clear is that special program students have no more appetite for sitting these examinations than the rest of the college student population. Likewise, such tests seem even less appropriate for evaluating programs for special students than for regular students.

Catch-Up and Catch-On

Using the evidence of retention, grade point average and to a lesser extent, standardized test scores, the programs of National Project II have documented their effectiveness. It is clear they work, but how? Two common threads seem to run through the reports of the Associates. One is emphasis on helping students make up academic deficiencies, especially in the basic skill areas of reading, writing and mathematics or arithmetic — the catch-up function — and secondly, teaching students how the academic world operates — the catch-on function.

Special program students share common characteristics. They all enter institutions of higher learning without the credentials which their more advantaged peers hold. They often come from homes at or close to the poverty level; they belong to minority groups — the migrant farm worker, the Viet-Nam war veterans, the middle life, under-educated Black, the Chicano, the child of the urban Black ghetto, the southern, rural farmer — each with different experiences but sharing a common difference: the lack of academic skills and experiences which the regular college student possess. These students perform poorly on college admission tests, they have not had distinguished academic careers in secondary school. Many have earned high school diplomas through examination or special programs. They usually are newcomers to the post-secondary education scene; they are often the first person in their family to attend college. Their aspirations for education beyond high school are newly acquired. And so they find themselves in a new and demanding world for which they are ill-prepared.

Each of the National Project II programs has recognized the differences characteristic of their program students in a unique fashion. California State at Fullerton studied the changing aspirations of the entering Educational Opportunity student; St. Edwards University has peer facilitators (often former program students) to help the newcomer learn how to be a learner at that institution; Southeastern Community College holds a three day retreat during which the new student learns to know his colleagues and the faculty as he participates in activities planned to increase his self-confidence as a learner; Marquette University has a six week summer program to give their special students a head start; Staten Island Community College appoints counselors who take the initiative in contacting students as they monitor their academic performance; each program in its own way recognizes that the special student must learn what expectations the faculty and the institution have for him and how to meet those expectations. Whatever the details, this seems to be the catch-on function, helping the student learn how to play the post-secondary education game.

The support systems these programs provide also enable students to make up deficiencies in academic preparation. Every program provides tutoring, often by peers. Both the Associates at St. Edwards University and the University of Florida report findings of positive relationships between hours spent in tutoring and course grades. In both programs students who are not performing satisfactorily are required to spend additional time with tutors. Many of the National Project II programs also provide remedial or developmental courses in the basic skills, as part of the initial experiences for special students. In every program, a large allocation of resources is made to help students overcome earlier academic deprivation, the catch-up function.

The key to this process throughout the various programs seems to be that for every student there is someone who knows what is happening academically to him. It may be another student, who has recently completed the program and now serves as a tutor, it may be a counselor who is responsible for monitoring students' academic gain, such as the program at Staten Island Community College, or it may even be through a computer-managed system which is used at the University of Florida. Students who are in academic difficulty are identified quickly in order that they may be given the help and encouragement they need before they have an opportunity to fail. The reports of the National Project II Associates would suggest the programs which serve as alternatives to the revolving door of post-secondary education must serve its students early and often, especially as they enter the institution and during their initial enrollment period. Secondly, there must be someone, perhaps another student who has successfully completed the program, who monitors the students academic performance and provides the praise, the encouragement, or the supplementary learning experiences which provide the margin between failure and success. The special student learns he too can survive and prosper in this new world of academic challenge.

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POLICY ISSUES, RESEARCH AGENDAS, PROGRAMMATIC CONCERNS: OR, WHAT I KNOW THAT I DON'T KNOW

In 1975, the Fund created the National Project Two strategy which provided support for the evaluation and improvement of already existing programs for underprepared and low-achieving students. Thus, in one sense, we were "piggy-backing" on other state and Federal initiatives which covered the operating expenses for Special Programs, but left little money for evaluation at the local level. A number of third-party evaluations of Federally-sponsored Special Programs such as Trio had already been carried out with special appropriations from the Office of Education's Planning and Evaluation branch. Using aggregate data, these evaluations, which left more questions about program effectiveness than they answered, focused on retention, GPA and other "quantifiable" measures of success. The Fund believed that it was important to take a different approach to the evaluation of specific effects in the field, and rather than look at the aggregate, we chose to focus our attention on *individual* projects that seemed to be successfully educating underprepared students. So, in other sense, we departed from standard practice by giving support to practitioners so that they might understand their programs better and thus, improve them.

From the experiences of National Project II, I have learned that educationally disadvantaged students present a number of challenges to the educational establishment. Their very presence on a campus might change the nature of the collegiate environment — who teaches whom and what is taught. Or, they may be viewed as interlopers and the challenge is to sort-out the few possible survivors from those who will never meet the regular standards. National Project Two has raised a number of research questions relating to the presence of underprepared students on college campuses. These research questions, in turn, raised programmatic issues which must be addressed by practitioners who wish to improve the quality of education for low-achieving students and ultimately for all students. From the point of view of the Funding Officer, there are three key research/policy issues which have emerged during the course of the Fund's involvement with National Project II. They are: *admissions criteria, allocation of resources,* and the determination of *benchmarks of achievement.*

Predictors of Academic Success

An important policy issue for institutions which are trying to help underprepared students relates to the usefulness of traditional predictors of academic success in college. One characteristic which the National Project Two Associates share is that either explicitly or implicity, they reject traditional admissions criteria. Instead of relying solely on high school averages or SAT scores, the programs have sought alternative ways of predicting success in college. Through personal interviews before students apply, through recommendations from knowledgeable persons within the students' communities, and through tests which measure motivation, Special Programs uncover students who may be underprepared, but have the ability and drive to overcome the legacy of educational disadvantage. It may well be that many so-called "high risk" students are really not as risky as they would first appear, because we have not developed meaningful instruments which can help us determine whether these students can persist through college.

One implication which can be drawn from the NPII evaluation reports concerns the necessity of knowing more about "successful" persisters — that is, why certain high risk students succeed where others fail. Key research questions might focus on the characteristics of "persisters" such as the analysis of family background, the behaviors of persisters, i.e. how much time they devote to study as compared with students who drop out, or the degree to which persisters "use" the special services provided. Counseling, tutorial and curriculum strategies are less important for some underprepared students than for others. Some students within each Special Program would have survived the rigors of the regular program of study. This kind of research has considerable pay-off when one considers the related issue of cost-effectiveness. If we could know which so-called "high risk" students would make it without additional support services and just admit them into the regular program, we could then focus our limited resources on students with greater need. Without disparaging the effectiveness of the National Project Associates' programs, one might say that it is still difficult to know whether the program is responsible for

persistence, or whether the careful screening procedures and non-traditional admissions criteria are the crucial variables.

Selection and Orientation Procedures

All too frequently "Open Admissions" has meant that a college will accept any student with a high school diploma or its equivalent. These Special Programs for low-achieving students function within Open Admissions institutions, but have established special orientation and selection procedures for students possessing a high school credential. This is possible only in "labor-intensive" programs where all prospective students receive individualized attention. Each student is interviewed prior to enrollment and background information is gathered on his/her record, not only in school, but in community activities as well. It is hard to measure the impact of an admissions process which takes students who believe they are unworthy and uncovers a talent and motivation for learning which, if properly and carefully nurtured, results in "salvaging" scores of persons turned out and off by the educational establishment.

Part of the "salvaging" process occurs immediately following acceptance into the Special Program. Throughout the evaluation reports and descriptions of NPII projects, one theme emerges clearly. The programs are structured to deliver more attention and support prior to, and during the students' first semester at the institution than any other time. Staff time is disproportionately directed towards making sure that students' early contact with the campus is positive — freshmen with a history of academic failure must be encouraged to think that they can learn and be successful in an academic environment. Some programs, such as the one at Southeastern Community College deliberately include a humanistic pyschology component into their student orientation to help build self-confidence. Few associates are this explicit about "affective" goals, but all focus on the issue of socializing freshmen to "studenthood" — its intrinsic joys as well as its *rites de passage*. No one at Saint Edward's University can accuse the CAMP program of "sugar-coating" its orientation for migrant youth. Students are told that if they do not apply themselves by studying at least five to ten hours a week, they won't survive in college. Special attention at a summer workshop or during the semester through regularly scheduled counseling and tutoring sessions means that the associates' programs are placing high value on helping students make the intellectual and emotional transition from feeling that they do not belong into feeling that they are indeed college material. To be sure, this transition strikes a delicate balance between encouraging students to believe in their abilities (even if they did not believe in them before), and getting students to think realistically about the difficulties that lie before them. Arriving at that proper balance requires a sensitive staff which spends time with students during that critical first few months of college.

Weaning Away

One of the more serious problems for successful Special Programs is weaning students away. It is not easy to know when or how to "mainstream" a genuine high risk student. We need to know how many special students use the program as a crutch, preventing others from participation. When can a program director be relatively confident that the student will make it on his/her own? The evidence is inconclusive. All we seem to know is that the first semester is an important period for all students, but especially for underprepared students. We have not developed useful predictors for measuring when students should be encouraged or even forced to leave programs they no longer need. The tendency for students to hang on long after the program has served its usefulness, is most ironic. The hangers-on are often the ones who need the program least, while the students with the greatest difficulties may be the first to leave. The experiences of NPII suggest that Programs should develop sophisticated diagnostic tools to analyze student "readiness" to move beyond the Special Program. These tools could prescribe a number of contrasting models of progress including reduced course load; the adoption of "Keller Plan"approaches to learning whereby students master material at their own pace; and the creation of learning contracts in which students gradually reduce their reliance on support services. Here, as with the question of admissions, cost-effectiveness becomes an important issue. If we knew when we should disengage some learners from support services, we might be able to better serve more students. The policy implications of spending one's resources disproportionately in the first semester means that less might be needed in subsequent semesters. Yet

most program directors are understandably nervous about admitting that their programs require different funding formulae. Nevertheless, I have come to believe that practitioners must understand the special needs of their students and fight for funding arrangements to reflect those needs. There is no particular virtue in having an academic program which budgets similar amounts of money and hires equal numbers of staff each semester, ignoring the evidence of changing student cognitive and affective achievement.

Learning about Learning

Finally, perhaps the most important less on to emerge from NPII, is that we know precious little about *learning* in Special Programs. The benchmarks of student achievement continue to be "process" and procedural evidences i.e. grade point average, attrition and retention data, and ratio of courses completed to courses attempted. This is understandable, even acceptable if we compare Special Programs with the "success" rate of colleges and universities. These institutions have historically used the same benchmarks to judge the quality of an academic program. How many Phi Beta Kappas? How many graduates? How many PHDs? Yet all programs should provide solid evidence that students are learning, as well as staying in college. We tend to know more about student, counselor, and faculty satisfaction with a given program than we do about whether that program is educating students to be better writers or problem solvers.

Higher education is facing a crisis of confidence in which many publics are questioning its performance. Special programs are not the only programs under careful scrutiny. Even Yale University is concerned that its undergraduates are not learning how to write and communicate effectively. Some Special Programs, including a number of the NPII Associates, have developed ways of measuring student achievement by borrowing sections from standardized tests and integrating them into their own particularized assessment tools. Many are using familiar subjective techniques such as having all student work reviewed by interdisciplinary faculty teams. All recognize that these techniques are primitive and that they still haven't developed and field-tested new instruments to assess student learning. Through NPII, Associates have become aware of the gap between their rhetoric of program performance and measuring student achievement. Because most special students start college behind their more traditional colleagues, the programs ought to be able to pick-up the changes in student achievement using even crude instruments. At least, this could be a beginning. Program and Individual Assessment are among the most important areas for applied research and development. Some key research and policy questions surrounding these areas include: what do we mean when we lament the passing of academic standards? Who determines those standards and how to faculty teach and test towards them? What is "college level" work? Can there ever be one standard for college-level achievement, and if so, what is it? And finally, what is the relationship between learning to "make-it" through school and learning for life? My impression is that the NPII Associates believe that they are helping students acquire skills to be lifelong learners — to survive not only through college, but on the job and in a variety of adult roles. It is too early to tell whether they are succeeding on all these fronts. We do know that these Special Programs have taken thousands of students the rest of academia thought were "uneducable" at the college level and helped them acquire the credential. No small feat, but is that enough?

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